

NOTICE:

"BEST AVAILABLE COPY"

**PORTIONS OF THE FOLLOWING
DOCUMENT ARE ILLEGIBLE**

The Administrative Record Staff

881 Hillside Restoration

Phase 1A

Documentation

ADMIN RECORD

Best Available Copy

"REVIEWED FOR CLASSIFICATION/UCM"

By B. L. MILLER (4)

Date 6-12-90

ACCIDENT PREVENTION PROPOSAL

Cont. No. 123JK

- D. Ladders shall be electrically nonconductive and be heavy duty construction type. Extension ladders shall be equipped with approved feet (anti-skid devices) and shall be extended only to the manufacturers design limit, these ladders shall be secured both top and bottom and shall be properly barricaded to divert vehicular and pedestrian traffic from the area if necessary

~~NOTE: If a metal ladder is to be used for mechanical construction, specific procedures and written permission must be obtained.~~

- E. ~~METAL LADDER MAY BE USE ON MECH. & STRUCTURE WORK ONLY PER CONTRACT SPECIFICATIONS~~
F. Any opening or edge on an elevated surface shall be properly covered or barricaded to prevent falling tripping or similar hazard.

It is the intent of this Accident Prevention Proposal to implement, indoctrinate, and enforce the provisions of this Plan to greatly reduce lost time due to accidents, delays due to unrecognized hazards, and to secure the welfare and productivity of the work force through continuous familiarity with proper safety procedures. The implementation of this Plan will be continuous and thorough, with required participation by all parties involved in the construction of this project, to insure the highest productivity and successful completion of this work.

REVIEWED BY		JOB SAFETY ANALYSIS		CONTRACT NO.: 58923JK
CM&I: <i>[Signature]</i>	DATE: January 15, 1990	PROJECT Remedial Action 881 Hillside area		BUILDING: 891
HS&E: <i>[Signature]</i>	DATE:	AUTH. NO.: <i>[Signature]</i>		AREA:
ISSUED: <i>[Signature]</i>	DATE:	PREPARED BY: Jose Garcia Construction Inc.		DATE:

SAFETY EQUIPMENT REQUIRED	TOOLS AND EQUIPMENT REQUIRED	HAZARDOUS MATERIALS
---------------------------	------------------------------	---------------------

Hard hats
 Eye Protection
 Safety Shoes or protectors
 Electrical safety gear

All shoring materials, i.e., lumbers, braces, stringers, heavy equipment, ladders, concrete saw, soil compactor, barricades, flagging, steel plating, lights, hand digging tools, general hand tools, and other tools or equipment pertaining to excavating or trenching as required for compliance with the specifications and OSHA requirements.

Fuel Oils, Gasoline
 Solvents, paints
 Adhesives
 Sodium hypochloric

DO NOT FILL IN (X)	INSPECT. BY:	INSPECTED & RELEASED BY:	WORK ACTIVITY	HAZARD	SAFETY MEASURES
			<p>1. <u>All Job Activity</u></p> <p>2. Excavation and earth backfill</p>	<p><u>Numerous</u> <u>(Housekeeping)</u></p> <p>2.1 Authorized digging-hitting live underground utilities or controlled areas.</p> <p>2.2 Excavations not properly shored, sloped or using trench boxes, endangering workers in trench.</p> <p>2.3 Improperly protected or barricaded excavation may allow personnel or motor vehicles to fall or drive into excavation.</p>	<p>1. Construction work is controlled by weekly work permit, CM & I Inspectors, I & SSE Safety Engineer and HS & E Area Engineer. <u>Good and safe housekeeping will be practiced.</u></p> <p>2.1 Excavation permit required per HS & E 6.01</p> <p>2.2 Shoring must comply per OSHA CFR 1926. Shoring must be inspected and approved by CM & I, I & SSE and/or Area Engineer prior to use.</p> <p>2.3 Excavations must be protected or barricaded at all times, using physical barriers, covers, fencing, planking, railing warning/caution signs and lights.</p>

DOO DOONT (X)	INSPECT. BY:	INSPECTED & RELEASED BY:	WORK ACTIVITY	HAZARD	SAFETY MEASURES
				<p>2.4 Workers not provided with safe access/egress to excavations over 4 feet deep.</p> <p>2.5 Weather conditions e.g., storms or other hazard increasing occurrence of slides or cave-ins.</p> <p>2.6 Spoil placed too close to excavation may cause slides or cave-ins.</p>	<p>2.4 Ladders will be placed to limit travel distance to a maximum of 25 feet. Ladders to extend at least 3 feet above surface of ground. Ladders shall be secured by staking <u>and tying-off.</u> (A/B)</p> <p>2.5 CM & I will inspect site excavations daily and may have to increase the inspection frequency and the protection against slides and cave-ins.</p> <p>2.6 Spoils will be placed a minimum of 4 feet from at least one side of the excavation lip. (A/B)</p>

DOD DONT (X)	INSPECT. BY:	INSPECTED & RELEASED BY:	WORK ACTIVITY	HAZARD	SAFETY MEASURES
				<p>2.7 Striking known obstruction.</p> <p>2.9 Excavating with heavy equipment.</p>	<p>2.7 Excavation shall be performed with extreme caution when within 3 feet (horizontal & vertical) of any known obstruction. Exploration near existing utilities shall be performed by hand digging with shovels under the direction of a competent ^{actual} person.</p> <p>2.9 A second person shall act as observer near the excavation to visually verify any unusual changes in the excavation material such as type of soil, concrete, locator tape, etc.</p> <p>2.10 Excavations exceeding 20 feet will be reviewed and shoring method will be designed by a competent engineer.</p>

GOOD CONT (X)	INSPECT. BY:	INSPECTED & RELEASED BY:	WORK ACTIVITY	HAZARD	SAFETY MEASURES
			<p>3. Encountering unusual substances, odors, liquids and materials.</p> <p>4. Working near heavy equipment.</p> <p>5. Overhead loads</p> <p>6. Power line installation and removal.</p>	<p>3. Unusual substances may be hazardous to personnel or the environment.</p> <p>4. High potential for personnel injury.</p> <p>5. Unsupported or weakened structural members or overhanging structures.</p> <p>6. Electrical shock</p>	<p>3. Stop work and contact CM & I Coordinator.</p> <p>4. Personnel remain clear of operating equipment. Safety equipment must be installed and operational.</p> <p>5. Personnel are not allowed to work under these items until properly braced and supported.</p> <p>6. Protective safety gear when possible and under <i>the direction of CM&I Coordinator</i></p>

881 Hillside Restoration

Phase 1A

Documentation

"REVIEWED FOR CLASSIFICATION/UCN"

By B L. MILLER (4)

Date 6-12-90

Wind Speed Shutdown Criteria

"REVIEWED FOR CLASSIFICATION"
By K. R. Smith
Date 5/1/83

INTEROFFICE CORRESPONDENCE

DATE June 12, 1990
TO T C Greengard, Env Restoration
FROM W S Busby, EMAD, Air Programs, Bldg T130B, x5603
SUBJECT SHUTDOWN CRITERIA FOR 881 HILLSIDE PROJECT

881SHUT WSB

25/1/1990 for WSB

The 881 Hillside Project shutdown criteria are as follows

CONSTRUCTION (Earth moving or other dust generating activities)

- Wind speeds over 15 mph for 2 consecutive 15 minute periods
(beacon will come on)
- Soil moisture less than 15%
- Dust suspension greater than 0.6 mg/m³

DRILLING

- Wind Speeds over 35 mph
- Soil moisture less than 15%
- Dust suspension greater than 0.6 mg/m³

These criteria will be in effect with the concurrence of the project manager


Project Manager Signature/Date



INTEROFFICE CORRESPONDENCE

DATE May 15, 1990 WSB-10-90
TO W. M. Bruninga, Facilities Engineering, Bldg 130
FROM *W.S.B.* W. S. Busby, Air Programs Group, EMA, Bldg T130B, x5603
SUBJECT WIND LIMITS FOR CONSTRUCTION ACTIVITIES

This is to update my March 30, 1990 letter of the same subject. Future data for construction sites will be collected at the site using a portable wind monitor. The data logger attached to the portable wind monitor will activate a beacon when the 15 minute average wind speed is over 15 miles per hour. The limit of 15 miles per hour comes from past practice and experience at the Rocky Flats. Also this limit is used at the Idaho facility. The following guideline is recommended for wind effects during construction:

- Dirt moving activities will stop when the beacon remains on for two consecutive 15 minute periods.
- Dirt moving activities may resume when the beacon has been off for two consecutive 15 minute periods.

Studies are being done to verify the 15 mile per hour limit and results will be provided to all interested parties upon completion.

The drilling shutdown windspeed criteria will remain at 35 mph per the drilling procedures. This windspeed limit is based on wetting techniques used in drilling procedures.

laa

cc.
M B. Arndt
Ike Duran
T C. Greengard
J Koffer
B R Lewis
A.J. Saunders



INTEROFFICE CORRESPONDENCE

DATE March 30, 1990 WSB-30-90 1
TO W. M. Bruninga, Facilities Engineering, Bldg. 130
FROM W. S. Busby, Air Program Group, EMAD, Bldg. T130B, x5603 WSB
SUBJECT WIND LIMITS FOR CONSTRUCTION ACTIVITIES

Attached are the wind data from January 15, 1990 to March 23, 1990. This data were collected from the 61 meter tower in the west buffer zone. Missing data is indicated by .9999. Negative wind speeds in the minimum wind speed column should be considered 0.

Future data for construction sites will be collected at the site using a portable wind monitor. The data logger attached to the portable wind monitor will activate a yellow beacon when the 15 minute average wind speed is over 15 miles per hour. The following guideline is recommended for wind effects during construction.

- Construction will stop when the beacon remains on for two consecutive 15 minute periods.
- Construction may resume when the beacon has been off for 2 consecutive 15 minute periods.

laa

INTEROFFICE CORRESPONDENCE

DATE April 5, 1990 RLM-04-90
TO G. M. Anderson
FROM R Morris, UNC Geotech *Robert Morris*
SUBJECT EVALUATION OF 881 HILLSIDE AIR MONITOR DATA

During the period of February 6, 1990 to February 20, 1990, air sampler S-81 was operated near 881 Hillside to obtain data necessary to demonstrate compliance with the Administrative Limit for radionuclides in fugitive dust of 0.03 pCi/m³

The sample was analyzed for total plutonium, Uranium-234, and Uranium-238. The results for each analyte were indistinguishable from background concentrations, with the standard deviation of the measurements being larger than the reported values. For plutonium the result was less than 0.000004 pCi/m³, for U-234 the result was less than 0.0000025 pCi/m³, for U-238 the result was less than 0.0000028 pCi/m³.

CONSTRUCTION DURING THE MONITORING PERIOD

Construction records for the monitoring period show the following tasks were performed by five to seven workers.

- Set forms for walls
- Set rebar re-inforcing steel for foundation and walls
- Clean-up after snowfall
- Install waterstop
- General clean-up

PLANNED RESTART TASKS

Before construction work can be fully restarted, air monitoring equipment must be wired and installed. This will involve five to seven workers and one or two light-duty vehicles over a period of approximately one week. The main task is to pull electrical wire through conduit. A hand-held vacuum cleaner will be used when pulling wire.

CONCLUSIONS

The planned work is not likely to cause fugitive dust activity levels significantly different from those measured during the monitoring period discussed above. The Administrative Limit of 0.03 pCi/m³ is not likely to be exceeded while performing the tasks necessary to re-start of 881 Hillside Phase 1A activities.

~~RLM~~ RLM sf

cc
T C Greengard

Onsite Samplers for February 1990

Sampler	No. of Samples	Total Air Volume	Total Plutonium (pCi/m3)	Total Error (pCi/m3)
---------	----------------	------------------	--------------------------	----------------------

S-01	21	37000	0.000333	0.000000
S-02	21			
S-03	21	8000	0.000010	0.000014
S-04	21	27000	0.000012	0.000006
S-05	2	32000	0.000110	0.000023
S-06	2	26000	0.000039	0.000018
S-07	2	33000	0.000091	0.000022
S-08	2	37000	0.000046	0.000011
S-09	2	38000	0.000325	0.000056
S-10	21	33000	0.000007	0.000004
S-11	21	33000	0.000005	0.000004
S-12	21	33000	0.000022	0.000006
S-13	21	34000	0.000001	0.000003
S-14	21	29000	0.000002	0.000003
S-15	21	31000	0.000003	0.000003
S-16	21	35000	5.154865e-07	0.000003
S-17	21	9000	0.000007	0.000012
S-18	21	33000	0.000040	0.000009
S-19	21	34000	0.000036	0.000008
S-20	21	34000	0.000032	0.000007
S-21	21	36000	0.000012	0.000005
S-22	21	30000	0.000005	0.000004
S-23	21	33000	0.000003	0.000004
S-24	21	43000	0.000002	0.000003

NO error
go to
from
Lab

find out
what going
on

S-81

1 24000
6630

-1.329178e-07 0.000004

No DATA on 2, 40, 58 & 61

*Continued**no g samples* Air Volume Input

Sampler	TOTAL AIR VOLUME	Total Plutonium (pCi/m3)	Total Error (pCi/m3)
S-51	49000	-0.000000	0.000002
S-52	56000	0.000002	0.000002
S-53	47000	-0.000000	0.000002
S-54	52000	-0.000001	0.000002
S-55	49000	-0.000001	0.000002
S-56	52000	0.000001	0.000002
S-57	46000	-0.000000	0.000002
S-58			
S-59	53000	0.000000	0.000003
S-60	52000	0.000000	0.000002
S-61			
S-62	16000	-0.000002	0.000006
S-63			
S-64			
S-65			
S-66			
S-67			
S-68	57000	0.000002	0.000003
S-69			
S-70			
S-71			
S-72			
S-73	40000	-0.000001	0.000002

Perimeter

FEB90_REPORT 14R x 3C

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No. of Samples Air Volume Input

Sampler		TOTAL AIR VOLUME	Total Plutonium (pCi/m3)	Total Error (pCi/m3)
S-31	1	17000	-0.000000	0.000006
S-32	1	51000	-0.000000	0.000002
S-33		49000	0.000000	0.000002
S-34	↓	32000	-0.000001	0.000003
S-35		53000	0.000000	0.000002
S-36		52000	0.000003	0.000003
S-37		47000	0.000002	0.000003
S-38		50000	0.000001	0.000002
S-39		51000	-0.000001	0.000002
S-40		25000	-0.000000	0.000004
S-41		51000	0.000000	0.000002
S-42		49000	0.000001	0.000002
S-43		41000	-0.000000	0.000002
S-44		49000	-0.000000	0.000002

Onsite Samplers for February 1990

Sampler	No. of Samples	Total Air Volume	Total Plutonium (pCi/m3)	Total Error (pCi/m3)
---------	----------------	------------------	--------------------------	----------------------

S-01	21	37000	0.000333	0.000000
S-02	21			
S-03	21	8000	0.000010	0.000014
S-04	21	27000	0.000012	0.000006
S-05	2	32000	0.000110	0.000023
S-06	2	26000	0.000039	0.000018
S-07	2	33000	0.000091	0.000022
S-08	2	37000	0.000046	0.000011
S-09	2	38000	0.000325	0.000056
S-10	21	33000	0.000007	0.000004
S-11	21	33000	0.000005	0.000004
S-12	21	33000	0.000022	0.000006
S-13	21	34000	0.000001	0.000003
S-14	21	29000	0.000002	0.000003
S-15	21	31000	0.000003	0.000003
S-16	21	35000	5.154865e-07	0.000003
S-17	21	9000	0.000007	0.000012
S-18	21	33000	0.000040	0.000009
S-19	21	34000	0.000036	0.000008
S-20	21	34000	0.000032	0.000007
S-21	21	36000	0.000012	0.000005
S-22	21	30000	0.000005	0.000004
S-23	21	33000	0.000003	0.000004
S-24	21	43000	0.000002	0.000003

NO error
of error
from
lab
find out
what going
on

S-81

1 24000

minus
-1.329188e-07 0.000004
0.00000013

No DATA on 2, 40, 58 & 61

.03 standard

154 RE

63

Work Permits

RADIOLOGICAL/HS&E WORK PERMIT

Instructions and requirements for the use of this form are contained in HS&E 6.05 Radiological/HS&E Work Permit

SECTION I JOB INFORMATION (To be completed by job supervisor or permit initiator)

Job Name: 881 H L Side Bldg 891 Foundation/Slab or WO #: 986147
 Bldg. 291 Room # --- Date 1-15-90 From 0800 (AM/PM) To 430 (AM/PM)
 Type of Work: Excavation, Set Forms, Haul Dirt
To Land Fill

SECTION II DESCRIPTION OF HAZARDS (To be completed by responsible user)

MATERIAL HAZARDS

☒ HNO₃ (Nitric Acid)
☐ HCl (Hydrochloric Acid)
☐ H₂SO₄ (Sulfuric Acid)
☐ HF (Hydrofluoric Acid)
☐ Caustic
☐ Flammables
☐ Trichloroethylene
☐ Beryllium
☐ Plutonium
☐ Uranium
☐ Asbestos

ELECTRICAL HAZARDS

Exposed System? ☒ Yes ☐ No
☐ 120V
☐ 220V
☐ 480V
☐ 600V
☐ Above 600V
☐ Laser Involved?
☒ Microwave Involved?

HIGH TEMP/HIGH PRESSURE

☐ Vacuum
☐ Ambient Pressure
☐ 15 psig
☐ >15 psig
☐ Below Ambient Temp
☐ Ambient Temp
☐ Above Ambient Temp
☐ Steam System
☐ Hydraulic System

Fire Suppression Interrupt? ☐ Yes ☒ No

Other hazards and precautions

SEE ATTACHED OR POSTED
EXCAVATION PERMIT

SECTION III RADIOLOGICAL AND NONRADIOLOGICAL SAFETY REQUIREMENTS (To be completed by Radiological Monitoring and/or HS&E Safety Engineer)

JOB SITE REVIEW REQUIRED ☐ Yes ☒ No

RADIOLOGICAL MONITORING REQUIRED ☒ YES ☐ NO

PROTECTIVE APPAREL

☒ Coveralls
☒ Tyvek Suit
☐ Plastic Suit
☐ Acid Suit
☐ Surgeon's Gloves
☐ Plastic Gloves
☐ Rubber Gloves
☒ Leather Gloves
☐ Cloth Cap
☐ Cloth Hood
☐ Plastic Hood
☐ Boots
☐ Plastic Boots
☐ Rubber Boots
☐ Safety Glasses
☐ Goggles
☐ Face Shield
☒ Hard Hat
☐ Hearing Protection
☐ Taped Openings
☐ Other

RESPIRATORY REQUIREMENTS

☒ Half Mask
☐ Full Face
☐ Self-Contained Breathing Air
☐ SCBA
☒ Chemical Canister

RADIOLOGICAL MONITORING REQUIREMENTS

☐ Start of job
☒ On call
☐ Full time

DOSIMETRY REQUIREMENTS

☒ TLD Dosimeter
☐ Extremity Dosimeter
☐ Special Dosimeter

ELECTRICAL PROTECTION REQUIREMENTS

(Consult Job Supervisor)
☐ Insulating Mat
☐ Insulating Blanket
☐ Cover up
☐ High Voltage Sleeves
☐ High Voltage Gloves
☐ Class I
☐ Class II
☐ Hot Sticks
☐ TIG Throat
☐ Insulated Bucket/Truck
☐ Grounding Cable
☐ Grounding Stick

CONTAMINATION CONTROL

VENTILATION REQUIREMENTS

☒ Containment Pen
☐ Plastic House
☐ SBA House
☐ Plastic Sleeve
☐ Glove Bag
☐ Air Mover
☐ Down Draft
☐ GHE Exhaust
☐ Other

RADIOLOGICAL MONITORING PRE-JOB SURVEY

Contamination level and extent 250cpm (background)

Gamma
 Neutron
 Limitations

Radiological Monitor Signature J. M. [Signature]

RADIOLOGICAL MONITORING POST-JOB SURVEY

Contamination levels and extent

Gamma
 Neutron

Radiological Monitor Signature

Other Special Requirements

TEMPORARY BARRICADES WITH
LIGHTS WILL BE PLACED AROUND
EXCAVATION & AREA FENCED OFF

Auth. of WO #

286147

Date

1-15-90

BLDG 861

SECTION IV PREPARATION FOR THE JOB (To be completed by the responsible user and job supervisor)

Area or equipment is ready to be worked on and is in safe condition
 necessary systems have been shutdown, drained, blanked, etc.
 necessary systems have been locked out/tagged out.
 Voltage checked after lock out.
 Utilities has been notified of upcoming work and is prepared.
 The Fire Department has been notified of upcoming work and is prepared.

Yes
 Yes
 Yes
 Yes
 Yes
 Yes
 Yes

N/A
 N/A
 N/A
 N/A
 N/A
 N/A

SECTION V APPROVAL SIGNATURES

THE ABOVE REQUIREMENTS HAVE BEEN REVIEWED WITH AND ARE UNDERSTOOD BY ALL JOB PERSONNEL

X Tony Sanchez, Daniel H. Port, Howard Smith, et al.
 X Paul A. Cummings, Phil Cummings, Orlando Herrera
 (Job personnel signature)

The Building Manager (designee) has been notified of upcoming work.

(notifier's initial)

THE SIGNATURES BELOW INDICATE REVIEW AND CONCURRENCE WITH THE WORK PERMIT

Responsible User

Job Supervisor

Logistical Monitoring Foreman (if applicable)

Contractor Supervisor (if applicable)

HS&E Safety Engineer

Other

SECTION VI PERMIT EXTENSION

WORK PERMIT EXTENDED TO

1-17-90

HS&E Safety Engineer

Job Supervisor agrees to tour area daily to ensure compliance with HS&E requirements (Initials required for each day of extension)

Dates 1-16 1-17 1-18 1-19

Initials

DISTRIBUTION

Job Supervisor White (retain permanently with job file)
 Responsible User Blue (retain for 30 days)
 Radiological Monitoring Yellow (retain for 30 days)

POST CARD AT JOB SITE

Authority WO 986147

Date 1-26-90

SECTION IV - PREPARATION FOR THE JOB to be completed by the responsible user and job supervisor

Is the area or equipment ready to be worked on and is in safe condition? ☒ Yes ☐ No
 The necessary systems have been shutdown, drained, blanked, and... ☒ Yes ☐ No
 The necessary systems have been locked out/tagged out. ☒ Yes ☐ No
 Voltage checked after lock out. ☒ Yes ☐ No
 Utilities has been notified of upcoming work and is prepared. ☒ Yes ☐ No
 The Fire Department has been notified of upcoming work and is prepared. ☒ Yes ☐ No

SECTION V - APPROVAL SIGNATURES

THE ABOVE REQUIREMENTS HAVE BEEN REVIEWED WITH AND ARE UNDERSTOOD BY ALL JOB PERSONNEL

X Paul A. Garabedian (Job personnel signature)
 X Frank [unclear] (Job personnel signature)

The Building Manager (or designee) has been notified of upcoming work (notifier's initials) SH

THE SIGNATURES BELOW INDICATE REVIEW AND CONCURRENCE WITH THE WORK PERMIT

Wm T. Zimmerman Responsible User
Frank [unclear] Job Supervisor
Paul A. Garabedian Contractor Supervisor (if applicable)
DR Smith Radiological Monitoring Foreman (if applicable)
DR Smith HS&E Safety Engineer
 Other _____

SECTION VI - PERMIT EXTENSION

WORK PERMIT EXTENDED TO 1-26-90

Job Supervisor agrees to tour area daily to ensure compliance with HS&E requirements (Initials required for each day of extension)

Date 1-23-90 1-24-90 1-25-90 1-26-90
DR Smith DR Smith DR Smith DR Smith

DISTRIBUTION

SECTION I JOB INFORMATION (To be completed by responsible user)

Job Name: 881 Hill Ave Bldg 891 Foundation 1-94 Auth of WO: 986147
 Bldg: 891 Room # Date: 1-29-90 From 8:00 (AM/PM) To 4:30 (AM/PM)

Scope of Work: SET FORMS, STEEL RE-INFORCING, PLACE CONCRETE

SECTION II DESCRIPTION OF HAZARDS (To be completed by responsible user)

MATERIAL HAZARD

- ☒ HNO₃ (Nitric Acid)
- ☒ HCl (Hydrochloric Acid)
- ☒ H₂SO₄ (Sulfuric Acid)
- ☒ HF (Hydrofluoric Acid)
- ☒ Caustic
- ☒ Flammables
- ☒ Trichloroethylene
- ☒ Beryllium
- ☒ Plutonium
- ☒ Uranium
- ☒ Asbestos

ELECTRICAL HAZARDS

- Energy System? ☒ Yes ☒ No
- ☒ 120V
- ☒ 220V
- ☒ 480V
- ☒ 600V
- ☒ Above 600V
- ☒ Laser Involved?
- ☒ Microwave Involved?

HIGH TEMP/HIGH PRESSURE

- ☒ Vacuum
- ☒ Ambient Pressure
- ☒ 15 psig
- ☒ >15 psig
- ☒ Below Ambient Temp
- ☒ Ambient Temp
- ☒ Above Ambient Temp
- ☒ Steam System
- ☒ Hydraulic System

Fire Suppression Interruption? ☐ Yes ☒ No

Other hazards and precautions: H. WINDS OVER 30 MPH. SHUT DOWN WORK.

SECTION III RADIOLOGICAL AND NONRADIOLOGICAL SAFETY REQUIREMENTS (To be completed by Radiological Monitoring and/or HS&E Safety Engineer)

JOB SITE REVIEW REQUIRED ☐ Yes ☒ No

RADIOLOGICAL MONITORING REQUIRED ☐ YES ☒ NO

PROTECTIVE APPAREL

- ☒ Coveralls
- ☒ Tyvek Suit
- ☒ Plastic Suit
- ☒ Acid Suit
- ☒ Surgeon's Gloves
- ☒ Plastic Gloves
- ☒ Rubber Gloves
- ☒ Leather Gloves
- ☒ Cloth Cap
- ☒ Cloth Hood
- ☒ Plastic Hood
- ☒ Booties
- ☒ Plastic Booties
- ☒ Rubber Boots
- ☒ Safety Glasses AS REQD
- ☒ Goggles
- ☒ Face Shield
- ☒ Hard Hat
- ☒ Hearing Protection
- ☒ Taped Openings
- ☒ Other

RESPIRATORY REQUIREMENTS

- ☒ Half Mask
- ☒ Full Face
- ☒ Self-Contained Breathing Air
- ☒ SBA
- ☒ Chemical Canister

RADIOLOGICAL MONITORING REQUIREMENTS

- ☒ Start of job
- ☒ On call
- ☒ Full time

DOSIMETRY REQUIREMENTS

- ☒ TLD Dosimeter
- ☒ Extremity Dosimeter
- ☒ Special Dosimeter

ELECTRICAL PROTECTION REQUIREMENTS

- ☒ (Consult Job Supervisor)
- ☒ Insulating Mat
- ☒ Insulating Blanket
- ☒ Cover
- ☒ High Voltage Sleeves
- ☒ High Voltage Gloves
- ☒ Class I
- ☒ Class II
- ☒ Hot Sticks
- ☒ Grounding Cable
- ☒ Grounding Stick

CONTAMINATION CONTROL

VENTILATION REQUIREMENTS

- ☒ Contaminant Pan
- ☒ Plastic House
- ☒ SBA House
- ☒ Plastic Squeegee
- ☒ Glove Bag
- ☒ Air Mover
- ☒ Down Draft
- ☒ FGD Exhaust

RADIOLOGICAL MONITORING PRE-JOB SURVEY

Contamination levels and extent

Gamma

Neutron

Limitations

Radiological Monitor Signature

RADIOLOGICAL MONITORING POST-JOB SURVEY

Contamination levels and extent

Gamma

Neutron

Radiological Monitor Signature

Other Special Requirements

Temporary
Backpacks w/ lights will be
placed around excavation
area.

9:31 47

Date 1-29-90

SECTION IV PREPARATION FOR THE JOB (To be completed by the responsible user and job supervisor)

The area or equipment is ready to be worked on and is in safe condition

Necessary systems have been shutdown, drained, blanked, etc.

Necessary systems have been locked out/tagged out.

Voltage checked after lock out.

Utilities has been notified of upcoming work and is prepared.

The Fire Department has been notified of upcoming work and is prepared.

Yes

Yes

Yes

Yes

Yes

Yes

N/A

N/A

N/A

N/A

N/A

SECTION V APPROVAL SIGNATURES

THE ABOVE REQUIREMENTS HAVE BEEN REVIEWED WITH AND ARE UNDERSTOOD BY ALL JOB PERSONNEL

X James Sales Howard Smith

X Tony Sales

(Job personnel signature)

The Building Manager (designee) has been notified of upcoming work.

(notifier's title)

THE SIGNATURES BELOW INDICATE REVIEW AND CONCURRENCE WITH THE WORK PERMIT

Wm Brunninga
Responsible User

Quashman
Job Supervisor

E. English X 4915 D 1526
Radiological Monitoring Foreman (if applicable)

Paul A. Cameron
Contractor Supervisor (if applicable)

D.R. Smith
HS&E Safety Engineer

Other

SECTION VI PERMIT EXTENSION

WORK PERMIT EXTENDED TO 2-2-90

D.R. Smith
HS&E Safety Engineer

Job Supervisor agrees to tour area daily to ensure compliance with HS&E requirements (Initials required for each day of extension)

Dates 1-30 1-31 2-1 2-2

Initials [Signatures]

DISTRIBUTION

Job Supervisor White (retain permanently with job file)
Responsible User Blue (retain for 30 days)
Radiological Monitoring Yellow (retain for 30 days)

POST CARD AT JOB SITE

FIRE AND EMERGENCY - DIAL 2911

RADIOLOGICAL/HS&E WORK PERMIT

Instructions and requirements for the use of this form are contained in HS&E 8 05 Radiological/HS&E Work Permit

SECTION I JOB INFORMATION (To be completed by job supervisor or permit initiator)

Job Name REMEDIAL ACTION 881 Hillside Auth or WO # 986147
 Bldg. 891 Room # Date 2-5-90 From 7 00 (AM/PM) To 4130 (AM/PM)
 Type of Work SETTING FRAME / SETTING REINFORCEMENT STEEL / Possibly Pour Concrete for foundation walls

SECTION II DESCRIPTION OF HAZARDS (To be completed by responsible user)

MATERIAL HAZARDS <input checked="" type="checkbox"/> HNO ₃ (Nitric Acid) <input type="checkbox"/> HCl (Hydrochloric Acid) <input type="checkbox"/> H ₂ SO ₄ (Sulfuric Acid) <input type="checkbox"/> HF (Hydrofluoric Acid) <input type="checkbox"/> Caustic <input type="checkbox"/> Flammables <input type="checkbox"/> Trichloroethylene <input type="checkbox"/> Beryllium <input type="checkbox"/> Plutonium <input type="checkbox"/> Uranium <input type="checkbox"/> Asbestos	ELECTRICAL HAZARDS Energized System <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> 120V <input type="checkbox"/> 220V <input type="checkbox"/> 480V <input type="checkbox"/> 600V <input type="checkbox"/> Above 600V <input type="checkbox"/> _____ V <input type="checkbox"/> Laser involved? <input type="checkbox"/> Microwave involved?	HIGH TEMP/HIGH PRESSURE <input checked="" type="checkbox"/> Vacuum <input type="checkbox"/> Ambient Pressure <input type="checkbox"/> <15 psig <input type="checkbox"/> >15 psig <input type="checkbox"/> _____ psig <input type="checkbox"/> Below Ambient Temp <input type="checkbox"/> _____ °F <input type="checkbox"/> Ambient Temp <input type="checkbox"/> Above Ambient Temp <input type="checkbox"/> _____ °F <input type="checkbox"/> Steam System <input type="checkbox"/> Hydraulic System
---	---	---

Fire Suppression Interruption? ☐ Yes ☒ No

Other hazards and precautions HIGH VOLTAGE CONTRACTOR WILL BE NOTIFIED TO SHUT DOWN
CARE WITH WORKING AROUND PARTICLE GENERATORS

SECTION III RADIOLOGICAL AND NONRADIOLOGICAL SAFETY REQUIREMENTS (To be completed by Radiological Monitoring and/or HS&E Staff)

JOB SITE REVIEW REQUIRED <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No PROTECTIVE APPAREL <input type="checkbox"/> Coveralls <input type="checkbox"/> Tyvek Suit <input type="checkbox"/> Plastic Suit <input type="checkbox"/> Acid Suit <input type="checkbox"/> Surgeon's Gloves <input type="checkbox"/> Plastic Gloves <input type="checkbox"/> Rubber Gloves <input checked="" type="checkbox"/> Leather Gloves <input type="checkbox"/> Cloth Cap <input type="checkbox"/> Cloth Hood <input type="checkbox"/> Plastic Hood <input type="checkbox"/> Boots <input type="checkbox"/> Plastic Booties <input type="checkbox"/> Rubber Boots <input checked="" type="checkbox"/> Safety Glasses <input type="checkbox"/> Goggles <input type="checkbox"/> Face Shield <input checked="" type="checkbox"/> Hard Hat <input type="checkbox"/> Hearing Protection <input type="checkbox"/> Taped Openings <input type="checkbox"/> Other	RESPIRATORY REQUIREMENTS <input type="checkbox"/> Half Mask <input type="checkbox"/> Full Face <input type="checkbox"/> Supplied Breathing Air <input type="checkbox"/> SCBA <input type="checkbox"/> Chemical Canister RADIOLOGICAL MONITORING REQUIREMENTS <input type="checkbox"/> Start of job <input type="checkbox"/> On call <input type="checkbox"/> Full time DOSIMETRY REQUIREMENTS <input type="checkbox"/> TLD Dosimeter <input type="checkbox"/> Extremity Dosimeter <input type="checkbox"/> Special Dosimeter ELECTRICAL PROTECTION REQUIREMENTS (Consult Job Supervisor) <input type="checkbox"/> Insulating Mat <input type="checkbox"/> Insulating Blanket <input type="checkbox"/> Cover up <input type="checkbox"/> High Voltage Sleeves <input type="checkbox"/> High Voltage Gloves <input type="checkbox"/> Class I <input type="checkbox"/> Class II <input type="checkbox"/> Hot Sticks <input type="checkbox"/> TIC Tracer <input type="checkbox"/> Insulated Bucket Truck <input type="checkbox"/> Grounding Cable <input type="checkbox"/> Grounding Stick	RADIOLOGICAL MONITORING REQUIRED <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO RADIOLOGICAL MONITORING PRE-JOB SURVEY Contamination levels and extent _____ Gamma _____ Neutron _____ Limitations _____ Radiological Monitor Signature _____ RADIOLOGICAL MONITORING POST-JOB SURVEY Contamination levels and extent _____ Gamma _____ Neutron _____ Radiological Monitor Signature _____ Other Special Requirements <u>AREA ROPED OFF</u> <u>FLAGS EVERY 6 FEET WITH 400' SIGNAGE</u> <u>BARBED WIRE WITH 400' SIGNAGE</u> <u>BANDING ON OTHER MATERIALS</u>
---	---	---

CONTAMINATION CONTROL VENTILATION REQUIREMENTS

☒ Containment Pen
☐ Plastic House
☐ SBA House
☐ Plastic Sleeve
☐ Glove Bag
☐ Air Mover
☐ Down Drift
☐ GB Exhaust
☐ Other

Foundation P.O.

WO 986147

Date 2-5-90

SECTION IV PREPARATION FOR THE JOB (To be completed by the responsible user and job supervisor)

The area or equipment is ready to be worked on and is in safe condition
 necessary systems have been shutdown, drained, blanked, etc.
 necessary systems have been locked out/tagged out. #
 Voltage checked after lock out.
 Utilities has been notified of upcoming work and is prepared
 The Fire Department has been notified of upcoming work and is prepared

Yes
 Yes N/A
 Yes N/A
 Yes N/A
 Yes N/A
 Yes N/A

SECTION V APPROVAL SIGNATURES

THE ABOVE REQUIREMENTS HAVE BEEN REVIEWED WITH AND ARE UNDERSTOOD BY ALL JOB PERSONNEL

X *James Garcia, Tony Salas, Terry Snyder*

(Job personnel signatures)

The Building Manager (or designee) has been notified of upcoming work

[Signature]
 notified in ()

THE SIGNATURES BELOW INDICATE REVIEW AND CONCURRENCE WITH THE WORK PERMIT

Wm Brumma

Responsible User

Roachman

Job Supervisor

J. English x4915 D-1506
 Radiological Monitoring Foreman (if applicable)

Paul A. Combs
 Contract Supervisor (if applicable)

D.R. Sweet

HS&E Safety Engineer

Other

SECTION VI PERMIT EXTENSION

WORK PERMIT EXTENDED TO 2-9-90

D.R. Sweet
 HS&E Safety Engineer

Job Supervisor agrees to re-enter area daily to ensure compliance with HS&E requirements (Initials required for each day of extension)

Dates 2-6 2-7 2-8 2-9

Initials *[Signatures]*

DISTRIBUTION

Job Supervisor White (retain permanently with job file)
 Responsible User Blue (retain for 30 days)
 Radiological Monitoring Yellow (retain for 30 days)

POST CARD AT JOB SITE

FIRE AND EMERGENCY - DIAL 2911

SECTION I JOB INFORMATION

Job Name: Removal of old steel reinforcement Job or Work: 2861K7
 Bldg: 291 Room: 12-90 Date: 0700 (AM/PM) To: 1630 (AM/PM)
 Type of Work: CONTAINMENT AREA FOR REMOVAL OF STEEL
WED. UNTIL 0800 MONDAY

SECTION II DESCRIPTION OF HAZARDS

MATERIAL HAZARDS

- ☒ HNO₃ (Nitric Acid)
- ☒ HCl (Hydrochloric Acid)
- ☒ H₂SO₄ (Sulfuric Acid)
- ☒ HF (Hydrofluoric Acid)
- ☒ Caustics
- ☒ Flammables
- ☒ Trichloroethylene
- ☒ Beryllium
- ☒ Plutonium
- ☒ Uranium
- ☒ Asbestos

ELECTRICAL HAZARDS

- ☒ 220V
- ☒ 480V
- ☒ 600V
- ☒ Above 600V
- ☒ Laser involved?
- ☒ Microwave involved?

HIGH TEMP/HIGH PRESSURE

- ☒ Vacuum
- ☒ Ambient Pressure
- ☒ <15 psig
- ☒ >15 psig
- ☒ Below Ambient Temp
- ☒ Ambient Temp
- ☒ Above Ambient Temp
- ☒ Steam System
- ☒ Hydraulic System

Fire Suppression interruption? ☒ Yes ☒ No

Other hazards and precautions: 45 MPA
ALL WORK SHALL STOP. WINDS OF
15 MPH ALL SOIL MOVING OR EXCAVATION SHALL STOP

SECTION III RADIOLOGICAL AND NONRADIOLOGICAL SAFETY REQUIREMENTS (To be completed by Radiological Monitoring and/or HS&E Safety Engineer)

JOB SITE REVIEW REQUIRED

☒ Yes ☒ No

RADIOLOGICAL MONITORING REQUIRED ☒ YES ☒ NO

PROTECTIVE APPAREL

- ☒ Coveralls
- ☒ Goggles
- ☒ Acid Suits
- ☒ Surgeon's Gloves
- ☒ Plastic Gloves
- ☒ Rubber Gloves
- ☒ Leather Gloves
- ☒ Cloth Cap
- ☒ Cloth Hood
- ☒ Plastic Hood
- ☒ Boots
- ☒ Plastic Boots
- ☒ Rubber Boots
- ☒ Safety Glasses as PPE
- ☒ Goggles as PPE
- ☒ Face Shield
- ☒ Hard Hat
- ☒ Hearing Protection
- ☒ Taped Openings
- ☒ Other

RESPIRATORY REQUIREMENTS

- ☒ Half Mask
- ☒ Full Face
- ☒ Supplied Breathing Air
- ☒ SCBA
- ☒ Chemical Canister

RADIOLOGICAL MONITORING REQUIREMENTS

- ☒ Start of job
- ☒ On call
- ☒ Full time

DOSIMETRY REQUIREMENTS

- ☒ TLD Dosimeter
- ☒ Extremity Dosimeter
- ☒ Special Dosimeter

ELECTRICAL PROTECTION REQUIREMENTS

- ☒ Consult Job Supervisor
- ☒ Locking Method
- ☒ Tagging Method
- ☒ Grounding Method

CONTAMINATION CONTROL

VENTILATION REQUIREMENTS

- ☒ Containment
- ☒ Plastic Hood
- ☒ SBA Hood
- ☒ Plastic Bag
- ☒ Glove Bag
- ☒ Air Monitor
- ☒ Down Draft
- ☒ HEPA Exhaust
- ☒ Other

RADIOLOGICAL MONITORING PRE-JOB SURVEY

Contamination levels and extent

Gamma _____
 Neutron _____
 Limitations _____

Radiological Monitor Signature

RADIOLOGICAL MONITORING POST-JOB SURVEY

Contamination levels and extent

Gamma _____
 Neutron _____

Radiological Monitor Signature

Other Special Requirements

147

2-12-20

PREPARATION FOR THE JOB (To be completed by the responsible user and job supervisor)

Tools or equipment ready to be worked on and is in safe condition
 Necessary systems have been shutdown drained blanked etc.
 Necessary systems have been locked out/tagged out.
 Voltage checked after lock out.
 Utilities has been notified of upcoming work and is prepared.
 The Fire Department has been notified of upcoming work and is prepared.

Yes ☒ Yes ☒ N/A
 Yes ☒ Yes ☒ N/A
 Yes ☒ Yes ☒ N/A
 Yes ☒ Yes ☒ N/A
 Yes ☒ Yes ☒ N/A

SECTION V - APPROVAL SIGNATURES

THE ABOVE REQUIREMENTS HAVE BEEN REVIEWED WITH AND ARE UNDERSTOOD BY ALL JOB PERSONNEL

X Paul A. Camacho John Salas Tony Salas
 X

(Job personnel signatures)

The Building Manager (or designee) has been notified of upcoming work

[Signature]
 (Notifier's initials)

THE SIGNATURES BELOW INDICATE REVIEW AND CONCURRENCE WITH THE WORK PERMIT

Wm Brunninga
 Responsible User

[Signature]
 Job Supervisor

[Signature]
 Radiological Monitoring Foreman (if applicable)

Paul A. Camacho
 Contractor Supervisor (if applicable)

Mark Breuer
 HS&E Safety Engineer

Other

SECTION VI - PERMIT EXTENSION

WORK PERMIT EXTENDED TO 2-16-20

Mark Breuer
 HS&E Safety Engineer

Job Supervisor agrees to tour area daily to ensure compliance with HS&E requirements (Initials required for each day of extension)

Dates 2-13 2-14 2-15 2-16

Initials [Signature] [Signature] [Signature] [Signature]

DISTRIBUTION

Job Supervisor White (retain permanently with job file)
 Responsible User Blue (retain for 30 days)
 Radiological Monitoring Yellow (retain for 30 days)

POST CARD AT JOB SITE

FIRE AND EMERGENCY - DIAL 2911

RADIOLOGICAL/HSA&E WORK PERMIT

Instructions: Fill in and use for the use of this form are contained in HSA&E 05 Radiological/HSA&E Work Permit

SECTION I. JOB INFORMATION (To be completed by job supervisor or permit initiator)

Job Name: ES1 Mill Sida Renewal Action Plan Auth or WO: # 286147

Proj: 8.91 Room: Foundation Date: 2-17-90 From: 0700 (AM/PM) To: 1600 (AM/PM)

Scope of Work: set water stop & foundation wall form
Please consult after inspection is completed

SECTION II. DESCRIPTION OF HAZARDS (To be completed by responsible user)

MATERIAL HAZARDS	ELECTRICAL HAZARDS	HIGH TEMP/HIGH PRESSURE
<input checked="" type="checkbox"/> HNO ₃ (Nitric Acid) <input type="checkbox"/> HCl (Hydrochloric Acid) <input type="checkbox"/> H ₂ SO ₄ (Sulfuric Acid) <input type="checkbox"/> HF (Hydrofluoric Acid) <input type="checkbox"/> Caustics <input type="checkbox"/> Flammables <input type="checkbox"/> Trichloroethylene <input type="checkbox"/> Beryllium <input type="checkbox"/> Plutonium <input type="checkbox"/> Uranium <input type="checkbox"/> Asbestos	Energized System? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> 120V <input type="checkbox"/> 220V <input type="checkbox"/> 480V <input type="checkbox"/> 600V <input type="checkbox"/> Above 600V <input type="checkbox"/> Laser Involved? <input type="checkbox"/> Microwave Involved?	<input type="checkbox"/> Vacuum <input type="checkbox"/> Ambient Pressure <input type="checkbox"/> <15 psig <input type="checkbox"/> >15 psig <input type="checkbox"/> _____ psig <input type="checkbox"/> Below Ambient Temp <input type="checkbox"/> _____ °F <input type="checkbox"/> Ambient Temp <input type="checkbox"/> Above Ambient Temp <input type="checkbox"/> _____ °F <input type="checkbox"/> Steam System <input type="checkbox"/> Hydraulic System
Fire Suppression Interruption? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Other hazards and precautions: <u>Please consult per spec, cover & heat as required</u> <u>placement at 40°F & rising</u>		

SECTION III. RADIOLOGICAL AND NONRADIOLOGICAL SAFETY REQUIREMENTS (To be completed by Radiological Monitoring and/or HSA&E Safety Engineer)

JOB SITE REVIEW REQUIRED Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	RADIOLOGICAL MONITORING REQUIRED YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
TECTIVE APPAREL <input type="checkbox"/> Coveralls <input type="checkbox"/> Tyvek Suit <input type="checkbox"/> Plastic Suit <input type="checkbox"/> Acid Suit <input type="checkbox"/> Urgeon's Gloves <input type="checkbox"/> Plastic Gloves <input type="checkbox"/> Rubber Gloves <input checked="" type="checkbox"/> Leather Gloves <input type="checkbox"/> Cloth Cap <input type="checkbox"/> Cloth Hood <input type="checkbox"/> Plastic Hood <input type="checkbox"/> Booties <input type="checkbox"/> Plastic Booties <input type="checkbox"/> Rubber Boots <input checked="" type="checkbox"/> Safety Glasses <u>per OSHA</u> <input type="checkbox"/> Goggles <input type="checkbox"/> Face Shield <input checked="" type="checkbox"/> Hard Hat <input type="checkbox"/> Hearing Protection <input type="checkbox"/> Taped Openings <input type="checkbox"/> Other:	RESPIRATORY REQUIREMENTS <input type="checkbox"/> Half Mask <input type="checkbox"/> Full Face <input type="checkbox"/> Supplied Breathing Air <input type="checkbox"/> SCBA <input type="checkbox"/> Chemical Canister RADIOLOGICAL MONITORING REQUIREMENTS <input type="checkbox"/> Start of Job <input checked="" type="checkbox"/> On call <input type="checkbox"/> Full time DOSIMETRY REQUIREMENTS <input checked="" type="checkbox"/> TLD Dosimeter <input type="checkbox"/> Extremity Dosimeter <input type="checkbox"/> Special Dosimeter ELECTRICAL PROTECTION REQUIREMENTS (Consult Job Supervisor) <input checked="" type="checkbox"/> Insulating Mat <input type="checkbox"/> Insulating Blanket <input type="checkbox"/> Cover in the <input type="checkbox"/> High Voltage Sleeves <input type="checkbox"/> High Voltage Gloves <input type="checkbox"/> _____ Class <input type="checkbox"/> _____ Class <input type="checkbox"/> Hot Stick <input type="checkbox"/> JIC Tracer <input type="checkbox"/> Insulated Bucket/Trip <input type="checkbox"/> Grounding Cable <input type="checkbox"/> Grounding Stick
CONTAMINATION CONTROL VENTILATION REQUIREMENTS <input checked="" type="checkbox"/> Containment Tent <input type="checkbox"/> Plastic House <input type="checkbox"/> SBA House <input type="checkbox"/> Plastic Sleeve <input type="checkbox"/> Glove Bag <input type="checkbox"/> Air Mover <input type="checkbox"/> Down Draft <input type="checkbox"/> GB Exhaust <input type="checkbox"/> Other:	RADIOLOGICAL MONITORING PRE-JOB SURVEY Contamination levels and extent: _____ Gamma: _____ Neutron: _____ Limitations: _____ Radiological Monitor Signature: _____ RADIOLOGICAL MONITORING POST-JOB SURVEY Contamination levels and extent: _____ Gamma: _____ Neutron: _____ Radiological Monitor Signature: _____ Other Special Requirements: _____ <u>Continued from previous page</u> <u>for the Monitor</u> <u>temporarily passed</u>

SECTION IV. PREPARATION FOR THE JOB (To be completed by the responsible user and job supervisor)

Area of equipment is ready to be worked on and is in safe condition. ☒ Yes ☐ N/A
 Necessary systems have been shutdown, drained, blanked, etc. ☒ Yes ☐ N/A
 Necessary systems have been locked out/tagged out. ☒ Yes ☐ N/A
 Voltage checked after lock out. ☒ Yes ☐ N/A
 Utilities has been notified of upcoming work and is prepared. ☒ Yes ☐ N/A
 The Fire Department has been notified of upcoming work and is prepared. ☒ Yes ☐ N/A

SECTION V. APPROVAL SIGNATURES

THE ABOVE REQUIREMENTS HAVE BEEN REVIEWED WITH AND ARE UNDERSTOOD BY ALL JOB PERSONNEL

X Caul A. Comarubon James Sater
 X Tony Sater Chief Sater
 (Job personnel signatures)

The Building Manager (designee) has been notified of upcoming work. [Signature]
 (notifier's initials)

THE SIGNATURE BELOW INDICATE REVIEW AND CONCURRENCE WITH THE WORK PERMIT

Wm Brumanga 5017
 Responsible User

[Signature]
 Job Supervisor D 1389 K 7602

E. English X 4915 D 1506
 Radiological Monitoring Foreman (if applicable)

Caul A. Comarubon
 Contractor Supervisor (if applicable)

D.R. Sater
 HS&E Safety Engineer

Other _____

SECTION VI. PERMIT EXTENSION

WORK PERMIT EXTENDED TO Feb 23, 1990

D.R. Sater
 HS&E Safety Engineer

J.C. West 2-17-90
 Job Supervisor agrees to tour area daily to ensure compliance with HS&E requirements (Initial required for each day of extension)

Dates 2-19 2-20 2-21 2-22 2-23

Initials [Signature] [Signature] [Signature] [Signature] [Signature]

DISTRIBUTION

Job Supervisor _____ White (retain permanently with job file)
 Responsible User _____ Blue (retain for 30 days)
 Radiological Monitoring _____ Yellow (retain for 30 days)

POST CARD AT JOB SITE

RADIOLOGICAL/HS&E WORK PERMIT

Instructions and requirements for the use of this form are contained in HS&E 8 05 Radiological/HS&E Work Permit

SECTION I JOB INFORMATION (To be completed by job supervisor or permit initiator)

Job Name REMEDIATION SECTION 28145 (FOUNDATION & PAD)Auth or WO # 986147Bldg. 891Room # ---Date 2-26-90From 0700(AM/PM) To 1630

(AM/PM)

Scope of Work REMOVE FURNACE ON WALL, FORMS, PATCH WALL, START COMPACTION & BACKFILLFOR FLOOR PAD, SERVICE PORTABLE GENERATOR FOR H2 MONITOR & START SETTING RE BAR ON THE
START EXCAVATION FOR SITE WORK. USED WEDNESDAY EXCAVATION REMOVED SO

SECTION II DESCRIPTION OF HAZARDS (To be completed by responsible user)

MATERIAL HAZARDS

- ☐ HNO₃ (Nitric Acid)
☐ HCl (Hydrochloric Acid)
☐ H₂SO₄ (Sulfuric Acid)
☐ HF (Hydrofluoric Acid)
☐ Caustic
☐ Flammable
☐ Trichloroethylene
☐ Beryllium
☐ Plutonium
☐ Uranium
☐ Asbestos

ELECTRICAL HAZARDS

* Energized System? ☐ Yes ☒ No

- ☐ 120V
☐ 220V
☐ 480V
☐ 600V
☐ Above 600V

V

☐ L. ser. Involved?☐ Microwave Involved?

HIGH TEMP/HIGH PRESSURE

Vapor

Ambient Pressure

☐ 1st p. g.☐ >1st p. g.

psig

Below Ambient Temp

°F

Ambient Temp

Above Ambient Temp

°F

Stim. yst. m

Hydr. l. System

Fire Suppression Interr. p. tion? ☐ Yes ☒ NoOther hazards and precautions: ALL EXCAVATION & SOIL PLACED SHALL STOP WITH WINDS
ABOVE 5 MPH

SECTION III RADIOLOGICAL AND NONRADIOLOGICAL SAFETY REQUIREMENTS (To be completed by Radiological Monitoring and/or HS&E Safety Engineer)

JOB SITE REVIEW REQUIRED ☐ Yes ☒ NoRADIOLOGICAL MONITORING REQUIRED ☒ YES ☐ NO

RADIOLOGICAL MONITORING PRE-JOB SURVEY

Contamination levels and extent ---Gamma ---Neutron ---Limitations ---Radiological Monitor Signature ---

RADIOLOGICAL MONITORING POST-JOB SURVEY

Contamination levels and extent ---Gamma ---Neutron ---Radiological Monitor Signature ---Other Special Requirements SERVICE NO. 106700A PORTABLE GEN ONLY ON SITE
& SUNDAY IS REQUIRED DURINGEXCAVATION & SOIL PLACEMENT
FOR FLOOR PAD

EFFECTIVE APPAREL

- ☐ Coveralls
☐ Tyvek Suit
☐ Plastic Suit
☐ Acid Suit
☐ Surgeon's Gloves
☐ Plastic Gloves
☐ Rubber Gloves
☐ Leather Gloves
☐ Cloth Cap
☐ Cloth Hood
☐ Plastic Hood
☐ Boots
☐ Plastic Boots
☐ Rubber Boots
☒ Safety Glasses PRO DANA
☒ Goggles AS REQ'D
☐ Face Shield
☒ Hard Hat
☒ Hearing Protection as req'd
☐ Speed Openings
☐ Other ---

RESPIRATORY REQUIREMENTS

- ☐ Half Mask
☐ Full Face
☐ Supplied Breathing A
☐ SCBA
☐ Chemical Canister

RADIOLOGICAL MONITORING REQUIREMENTS

- ☐ Start of job
☐ On call
☐ Full time

DOSIMETRY REQUIREMENTS

- ☒ TLD Dosimeter
☐ Extremity Dosimeter
☐ Special Dosimeter

ELECTRICAL PROTECTION REQUIREMENTS

(Consult Job Supervisor)

- ☐ Insulating Mat
☐ Insulating Blanket
☐ Cover up
☐ High Voltage Sleeves
☐ High Voltage Gloves
☐ Class I
☐ Class II
☐ Hot Stick
☐ TIC Tracer
☐ Insulated Bucket Truck
☐ Grounding Cable
☐ Grounding Stick

CONTAMINATION CONTROL

VENTILATION REQUIREMENTS

- ☐ Containment Pan
☐ Plastic House
☐ SEA House
☐ Plastic Sleeve
☐ Glove Bag
☐ Air Filter
☐ Down Draft
☐ BE Exhaust
☐ Other ---

BLDG 891

WO# 986147

Date FEB 26, 1990

SECTION IV - PREPARATION FOR THE JOB (To be completed by the responsible user and job supervisor)

The area or equipment is ready to be worked on and is in safe condition
 The necessary systems have been shutdown, drained, blanked, etc.
 The necessary systems have been locked out/tagged out, # _____
 Valves checked after lock out
 Utilities has been notified of upcoming work and is prepared
 The Fire Department has been notified of upcoming work and is prepared

☒ Yes
☐ Yes ☒ N/A
☐ Yes ☒ N/A
☐ Yes ☒ N/A
☐ Yes ☒ N/A
☐ Yes ☒ N/A

SECTION V - APPROVAL SIGNATURES

THE ABOVE REQUIREMENTS HAVE BEEN REVIEWED WITH AND ARE UNDERSTOOD BY ALL JOB PERSONNEL

Paul A. Conner
James S. Sikes

(Job personnel signatures)

The Building Manager (designee) has been notified of upcoming work _____
 (notifier's initials)

THE SIGNATURES BELOW INDICATE REVIEW AND CONCURRENCE WITH THE WORK PERMIT

Wm. Gunning
 Responsible User

Paul A. Conner
 Job Supervisor

P. English X-115 D-15010
 Radiological Monitoring Foreman (if applicable)

Donachian X-7602 D-1339
 Contractor Supervisor (if applicable)

Rt. Martinez
 HS&E Safety Engineer

Other

SECTION VI - PERMIT EXTENSION

WORK PERMIT EXTENDED TO MAR 4, 1990

Rt. Martinez
 HS&E Safety Engineer

Job Supervisor agrees to tour area daily to ensure compliance with H&E requirements (Initials required for each day of extension)

Dates: FEB 27 FEB 28 MAR 1 MAR 2 MAR 3 MAR 4

Initials: *[Signatures]*

DISTRIBUTION

Job Supervisor: White (retain permanently with job file)
 Responsible User: Blue (retain for 30 days)
 Radiological Monitoring: Yellow (retain for 30 days)

POST CARD AT JOB SITE

RADIOLOGICAL/HS&E WORK PERMIT

Instructions and requirements for the use of this form are contained in HS&E 6.05 Radiological/HS&E Work Permits

SECTION I JOB INFORMATION (To be completed by job supervisor or permit initiator)

Job Name REMEDIAL ACTION 88/45 Phase I Author WO # 986147
Bldg 891 Floor # --- Date MAY 15, 1990 From 0700 (AM/PM) 1630 (AM/PM)

Scope of Work Install steel (Rebar) reinforcement, concrete floor and Gravel, separate for underground elect. Conduits + grading as required.

SECTION II DESCRIPTION OF HAZARDS (To be completed by responsible person)

MATERIAL HAZARDS

- ☒ HNO₃ (Nitric Acid)
- ☐ HCl (Hydrochloric Acid)
- ☐ H₂SO₄ (Sulfuric Acid)
- ☐ HF (Hydrofluoric Acid)
- ☐ Caustic
- ☐ Flammable
- ☐ Trichloroethylene
- ☐ Beryllium
- ☐ Potassium
- ☐ Uranium
- ☐ Asbestos

ELECTRICAL HAZARDS

- Electrical System? ☒ Yes ☐ No
- ☒ 120V
- ☐ 240V
- ☐ 480V
- ☐ 600V
- ☐ Above 600V
- ☐ User Involved?
- ☐ Microwave involved?

HIGH TEMP/HIGH PRESSURE

- ☐ Ambient Pressure
- ☐ 15 psig
- ☐ 15 psig
- ☐ Below Ambient Temperature
- ☐ Ambient Temperature
- ☐ Above Ambient Temperature
- ☐ In System
- ☐ Hydraulic System

Is there a potential for fire? ☐ Yes ☒ No

Other hazard precaution WIND OVER 15 MPH NO OPERATIONS, OR SOIL COMPACTION SHALL BE IN OPERATION (EQUIPMENT)

SECTION III RADIOLOGICAL AND NONRADIOLOGICAL SAFETY REQUIREMENTS (To be completed by Radiological Monitoring and/or HS&E safety person)

ON-SITE REVIEW REQUIRED ☐ Yes ☒ No

RADIOLOGICAL MONITORING REQUIRED ☒ YES ☐ NO

PROTECTIVE APPAREL

- ☐ Coveralls
- ☐ Tyvek suit
- ☐ Plastic suit
- ☐ Acid Suit
- ☐ Safety Goggles
- ☐ Plastic Goggles
- ☐ Rubber Gloves
- ☒ Leather Glove
- ☐ Cloth Cap
- ☐ Cloth Hood
- ☐ Plastic Hood
- ☐ Boots
- ☐ Plastic Boots
- ☐ Rubber Boots
- ☒ Safety Glasses REQ OAD
- ☐ Goggles REQ
- ☐ Face Shield
- ☒ Hard Hat
- ☒ Hearing Protection as req'd
- ☐ Taped Openings
- ☐ Other

RESPIRATORY REQUIREMENTS

- ☒ Half Mask
- ☐ Full Face
- ☐ supplied Breathing Apparatus
- ☐ CBA
- ☐ Chemical Canister

RADIOLOGICAL MONITORING REQUIREMENTS

- ☐ Part of job
- ☒ In call
- ☐ Full time

DOSIMETRY REQUIREMENTS

- ☒ TLD Dosimeter
- ☐ Extremity Dosimeter
- ☐ Personal Dosimeter

ELECTRICAL PROTECTION REQUIREMENTS

(Consult Job Supervisor)

- ☐ Insulating Mat
- ☐ Insulating Blanket
- ☐ Cover up
- ☐ High Voltage Sleeves
- ☐ High Voltage Gloves
- ☐ Class I
- ☐ Class II
- ☐ Hot Sticks
- ☐ TIC Trailer
- ☐ Insulated Bucket Truck
- ☐ C d g r ble
- ☐ C d g St t

CONTAMINATION CONTROL VENTILATION REQUIREMENTS

- ☒ Containment Pan
- ☐ Plastic House
- ☐ SEA House
- ☐ Plastic Sleeve
- ☐ Glove Bag
- ☐ Air M
- ☐ Down Draft
- ☐ GBE Exhaust
- ☐ Other

RADIOLOGICAL MONITORING PRE-JOB SURVEY

Contamination levels and extent

Gamma ---
Neutron ---
Limitations ---

Radiological Monitor Signature

RADIOLOGICAL MONITORING POST-JOB SURVEY

Contamination level and extent

Gamma ---
Neutron ---

Radiological Monitor Signature

H.P. Survey as Required
Other Special Requirements Servicing of portable Pan for air monitor on Sub & Pan as required for expansion of backfill operations

SECTION I - JOB INFORMATION (To be completed by job supervisor or permit initiator)

Job Name: Removal of 8" HCL SOIL Job No: 88624 986147
 Date: MAR 12 1998 Time: 0700 (AM/PM) To: 1630 (AM/PM)

One of Work: SET FORMS FOR INFIRMING STEEL & PLACE OBSCURE FLOOR AND SECTIONS AND
INSTALL UNDERGROUND PIPING IN FLOOR
EXCAVATE A GRADE SOIL FOR REQ'D DGS, DRAIN UNDER GROUND CONDUIT, PIPING FOR CONCRETE PIER

SECTION II - DESCRIPTION OF HAZARDS (To be completed by responsible user)

MATERIAL HAZARDS

- ☐ H₂O₂ (Nitric Acid)
- ☐ HCl (Hydrochloric Acid)
- ☐ H₂SO₄ (Sulfuric Acid)
- ☐ HF (Hydrofluoric Acid)
- ☐ Causative
- ☐ Flammable
- ☐ Chloroethylene
- ☐ Beryllium
- ☐ Plutonium
- ☐ Uranium
- ☐ Asbestos

ELECTRICAL HAZARDS

- Energized System
 - ☐ Yes ☒ No
 - ☐ 120V
 - ☐ 220V
 - ☐ 480V
 - ☐ 600V
 - ☐ Above 500V
- ☐ Laser involved?
- ☐ Microwave involved?

HIGH TEMP/HIGH PRESSURE

- ☐ Vacuum
- ☐ Ambient Pressure
- ☐ <15 psig
- ☐ >15 psig
- ☐ Below Ambient Temp
- ☐ Ambient Temp
- ☐ Above Ambient Temp
- ☐ Steam System
- ☐ Hydraulic System

Fire Suppression Interruption? ☐ Yes ☒ No

Other hazards and precautions: AS EXCAVATION, SOIL REMOVAL OR GRADING SHALL STOP, IF WIND
IS ABOVE 15 MPH FOR HOUR
NOTE: EXCAVATION PERMIT IS POSTED ON JOB SITE.

SECTION III - RADIOLOGICAL AND NONRADIOLOGICAL SAFETY REQUIREMENTS (To be completed by Radiological Monitoring and/or HSA&E, Safety Engineer)

JOB SITE REVIEW REQUIRED ☐ Yes ☒ No

RADIOLOGICAL MONITORING REQUIRED ☐ YES ☒ NO

PROTECTIVE APPAREL

- ☐ Coveralls
- ☐ Tyvek Suit
- ☐ Plastic Suit
- ☐ Acid Suit
- ☐ Surgeon's Gloves
- ☐ Plastic Gloves
- ☐ Rubber Gloves
- ☐ Leather Gloves
- ☐ Cloth Cap
- ☐ Cloth Hood
- ☐ Plastic Hood
- ☐ Boots
- ☐ Plastic Boots
- ☐ Rubber Boots
- ☒ Safety Glasses AS REQ'D
- ☐ Goggles AS REQ'D
- ☐ Face Shield
- ☒ Hard Hat
- ☐ Hearing Protection
- ☐ Taped Openings
- ☐ Other

RESPIRATORY REQUIREMENTS

- ☐ Half Mask
- ☐ Full Face
- ☐ Supplied Breathing Air
- ☐ SCBA
- ☐ Chemical Canister

RADIOLOGICAL MONITORING REQUIREMENTS

- ☐ Start of job
- ☒ On call
- ☐ Full time

DOSIMETRY REQUIREMENTS

- ☒ TLD Dosimeter
- ☐ Extremity Dosimeter
- ☐ Special Dosimeter

ELECTRICAL PROTECTION REQUIREMENTS

- ☐ (Consult Job Supervisor)
- ☐ Insulating Mat
- ☐ Insulating Blanket
- ☐ Cover up
- ☐ High Voltage Shoes
- ☐ High Voltage Gloves
- ☐ Class I
- ☐ Class II
- ☐ Hot Sticks
- ☐ TIG Welder
- ☐ Insulated Bucket Truck
- ☐ Grounding Cable
- ☐ Grounding Stick

CONTAMINATION CONTROL

VENTILATION REQUIREMENTS

- ☒ Containment Pon
- ☐ Plastic House
- ☐ SEA House
- ☐ Plastic Glove
- ☐ Glove Bag
- ☐ Air Mover
- ☐ Down Drift
- ☐ AB Exhaust
- ☐ Other

RADIOLOGICAL MONITORING PRE-JOB SURVEY

Contamination levels and extent

- Gamma
- Neutron
- Lim tabs

Radiological Monitor Signature

RADIOLOGICAL MONITORING POST-JOB SURVEY

Contamination level and extent

- Gamma
- Neutron

Radiological Monitor Signature

Other Special Requirements: SITE SURVEY WILL

BE NOTIFIED, IN ADVANCE

REQ'D FOR SURVEYING SOIL

REMOVAL

Date

SECTION IV PREPARATION FOR THE JOB (To be completed by the responsible user and job supervisor)

Area or equipment is ready to be worked on and is in safe condition
 necessary systems have been shutdown drained blanked, etc.
 no necessary systems have been locked out/tagged out.
 Voltage checked after lock out.
 Utilities has been notified of upcoming work and is prepared.
 The Fire Department has been notified of upcoming work and is prepared

Yes
 Yes N/A
 Yes N/A
 Yes N/A
 Yes N/A
 Yes N/A

SECTION V APPROVAL SIGNATURES

THE ABOVE REQUIREMENTS HAVE BEEN REVIEWED WITH AND ARE UNDERSTOOD BY ALL JOB PERSONNEL

Paul A. Cranston
Tommy Sulas

(Job personnel signature)

The Working Manager (or designee) has been notified of upcoming work

(notifier's initials)

THE SIGNATURES BELOW INDICATE REVIEW AND CONCURRENCE WITH THE WORK PERMIT

Wm Brunning X5017
 Responsible User

J. English 4965 D-1506
 Radiological Monitoring Foreman (if applicable)

D.R. Smith
 HS&E Safety Engineer

HS&E Safety Engineer

SECTION VI PERMIT EXTENSION

WORK PERMIT EXTENDED TO *Mar 16, 1990*

D.R. Smith
 HS&E Safety Engineer

Job Supervisor agrees to tour area daily to ensure compliance with HS&E requirements (Initials required for each day of extension)

Dates *3-13* *3-14* *3-15* *3-16*

Initials *ant* *xy* *SM* *JP*

DISTRIBUTION

Job Supervisor White (retain permanently with job file)
 Responsible User Blue (retain for 30 days)
 Radiological Monitoring Yellow (retain for 30 days)

POST CARD AT JOB SITE

RADIOLOGICAL HS&E WORK PERMIT (G.A.S. 2-1)

Instructions and requirements for the use of this form are contained in HS&E 6.05 Radiological HS&E Work Permit

SECTION I - JOB INFORMATION (To be completed by job supervisor or permit initiator)

Job Name Removal Station 22/11/11/12 Auth or IWO # 986147
Wdg. # 891 Room # Date March 19, 1990 From 0700 (AM/PM) To 1630 (AM/PM)

Scope of Work PLACE CONCRETE FORMS, RE-BAR WATER STOP, CONCRETE, REMOVE FORMS, CLEAN SITE, EXCAVATE, BACK FILL, GRASS & CONTACT OF REBAR, INSTALL, UNDERGROUND CONDUITS WIRE AND OTHER FIRST BOX FOR TERMINALLY CONDUIT, 5' DEEP TRENCH (CAUTION DURING) - REPAIR DAMAGE TO THE CONCRETE SITE, REMOVE EXISTING

SECTION II - DESCRIPTION OF HAZARDS (To be completed by responsible user)

MATERIAL HAZARDS	ELECTRICAL HAZARDS	HIGH TEMP/HIGH PRESSURE
<input checked="" type="checkbox"/> HNO ₃ (Nitric Acid)	Energized System? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Vacuum
<input checked="" type="checkbox"/> HCl (Hydrochloric Acid)	<input type="checkbox"/> 120V	<input type="checkbox"/> Ambient Pressure
<input checked="" type="checkbox"/> H ₂ SO ₄ (Sulfuric Acid)	<input type="checkbox"/> 220V	<input type="checkbox"/> 15 psig
<input checked="" type="checkbox"/> HF (Hydrofluoric Acid)	<input type="checkbox"/> 480V	<input type="checkbox"/> >15 psig
<input checked="" type="checkbox"/> Caustic	<input type="checkbox"/> 600V	<input type="checkbox"/> _____ psig
<input checked="" type="checkbox"/> Flammables	<input type="checkbox"/> Above 600V	<input type="checkbox"/> Below Ambient Temp
<input checked="" type="checkbox"/> Trichloroethylene	<input type="checkbox"/> _____ V	<input type="checkbox"/> _____ °F
<input checked="" type="checkbox"/> Beryllium	<input type="checkbox"/> L ser involved?	<input type="checkbox"/> Ambient Temp
<input checked="" type="checkbox"/> Plutonium	<input type="checkbox"/> Micro rads 1 volv 1?	<input type="checkbox"/> Above Ambient Temp
<input checked="" type="checkbox"/> Uranium		<input type="checkbox"/> _____ °F
<input checked="" type="checkbox"/> Asbestos		<input type="checkbox"/> Steam System
Fire suppression interruption? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/> Hydraulic System

Other hazards and precautions ALL EXCAVATION & SOIL REMOVAL SHALL STOP WHEN WINDS EXCEED 13 MPH

SECTION III - RADIOLOGICAL AND NONRADIOLOGICAL SAFETY REQUIREMENTS (To be completed by Radiological Monitoring and/or HS&E Safety Engineer)

JOBSITE REVIEW REQUIRED <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	RADIOLOGICAL MONITORING REQUIRED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
PROTECTIVE APPAREL	RADIOLOGICAL MONITORING PRE-JOB SURVEY
<input checked="" type="checkbox"/> Coveralls	Contamination levels and extent _____
<input checked="" type="checkbox"/> Tyvek Suit	Gamma _____
<input checked="" type="checkbox"/> Plastic Suit	Neutron _____
<input checked="" type="checkbox"/> Hood Suit	Linatons _____
<input checked="" type="checkbox"/> Surgeon's Gloves	
<input checked="" type="checkbox"/> Plastic Gloves	Radiological Monitor Signature _____
<input checked="" type="checkbox"/> Rubber Gloves	
<input checked="" type="checkbox"/> Leather Gloves	RADIOLOGICAL MONITORING POST-JOB SURVEY
<input checked="" type="checkbox"/> Cloth Cap	Contamination levels and extent _____
<input checked="" type="checkbox"/> Cloth Hood	Gamma _____
<input checked="" type="checkbox"/> Plastic Hood	Neutron _____
<input checked="" type="checkbox"/> Boots	
<input checked="" type="checkbox"/> Plastic Boots	Radiological Monitor Signature _____
<input checked="" type="checkbox"/> Rubber Boots	
<input checked="" type="checkbox"/> Safety Glasses <u>AS REQ'D</u>	Other Special Requirements _____
<input checked="" type="checkbox"/> Goggles <u>PER OSHA</u>	<u>ALL FUEL GAS SHALL BE SHUT OFF & LOCKED</u>
<input checked="" type="checkbox"/> Face Shield	<u>ALL K NITRILINE, AIR MONITORING</u>
<input checked="" type="checkbox"/> Hard Hat	<u>FOR P. OPERATIONAL DURING THE CONSTRUCTION</u>
<input checked="" type="checkbox"/> Hearing Protection	
<input checked="" type="checkbox"/> Taped Openings	
<input checked="" type="checkbox"/> Other _____	
CONTAMINATION CONTROL	
VENTILATION REQUIREMENTS	
<input checked="" type="checkbox"/> Containment Pen	
<input checked="" type="checkbox"/> Plastic House	
<input checked="" type="checkbox"/> SBA House	
<input checked="" type="checkbox"/> Plastic Sleeve	
<input checked="" type="checkbox"/> Glove Bag	
<input checked="" type="checkbox"/> Air Mover	
<input checked="" type="checkbox"/> Down Draft	
<input checked="" type="checkbox"/> GB Exhaust	
<input checked="" type="checkbox"/> Other _____	
RESPIRATORY REQUIREMENTS	
<input checked="" type="checkbox"/> Half Mask	
<input checked="" type="checkbox"/> Full Face	
<input checked="" type="checkbox"/> Supplied Breathing Air	
<input checked="" type="checkbox"/> SCBA	
<input checked="" type="checkbox"/> Chemical Canister	
RADIOLOGICAL MONITORING REQUIREMENTS	
<input checked="" type="checkbox"/> Start of job	
<input checked="" type="checkbox"/> On call	
<input checked="" type="checkbox"/> Full time	
DOSIMETRY REQUIREMENTS	
<input checked="" type="checkbox"/> TLD Dosimeter	
<input checked="" type="checkbox"/> Extremity Dosimeter	
<input checked="" type="checkbox"/> Special Dosimeter	
ELECTRICAL PROTECTION REQUIREMENTS	
<input checked="" type="checkbox"/> (Consult Job Supervisor)	
<input checked="" type="checkbox"/> Insulating Mat	
<input checked="" type="checkbox"/> Insulating Blanket	
<input checked="" type="checkbox"/> Cover up	
<input checked="" type="checkbox"/> High Voltage Sleeves	
<input checked="" type="checkbox"/> High Voltage Gloves	
<input checked="" type="checkbox"/> Class I	
<input checked="" type="checkbox"/> Class II	
<input checked="" type="checkbox"/> Hot Leads	
<input checked="" type="checkbox"/> Hot Tracer	
<input checked="" type="checkbox"/> Insulated Bucket Truck	
<input checked="" type="checkbox"/> Grounding Cable	
<input checked="" type="checkbox"/> Grounding Stick	

98647

Date March 19, 1990

SECTION IV: PREPARATION FOR THE JOB (To be completed by the responsible user and job supervisor)

- ☒ The work area is ready to be worked on and is in safe condition
- ☒ The necessary systems have been shutdown, drained, blanked, etc.
- ☒ The necessary systems have been locked out/tagged out
- ☒ Voltage checked after lock out
- ☒ Utilities has been notified of upcoming work and is prepared
- ☒ The Fire Department has been notified of upcoming work and is prepared

- ☒ Yes
- ☐ Yes ☐ N/A
- ☐ Y ☐ N/A
- ☐ Y ☐ N/A
- ☐ Y ☐ N/A
- ☐ Yes ☐ N/A

SECTION V: APPROVAL SIGNATURES

THE ABOVE REQUIREMENTS HAVE BEEN REVIEWED WITH AND ARE UNDERSTOOD BY ALL JOB PERSONNEL

Coul A. Columbian *Tony Torres*
James Silva *Ben Jones*
 (Job personnel signature)
Charles Brandt
 The Building Manager (or designee) has been notified of upcoming work
 (notifier's initial)

THE SIGNATURES BELOW INDICATE REVIEW AND CONCURRENCE WITH THE WORK PERMIT

Wm Bruni ga *x5017*
 Responsible User
5150
x4915 D 506
 Radiological Monitoring Foreman (if applicable)
Say D. Shuman
 HS&E Safety Engineer

James Silva *Page D-133*
 Job Supervisor
Coul A. Columbian
 Contractor Supervisor (if applicable)
James Silva
 Other

SECTION VI: PERMIT EXTENSION

WORK PERMIT EXTENDED TO: *March 25, 1990*

Say D. Shuman
 HS&E Safety Engineer

Job Supervisor agrees to tour area daily to ensure compliance with HS&E requirements (Initials required for each day of extension)

Dates: *3-20* *3-21* *3-22* *3-23* *3-24* *3-25*
Now
 Initials: *[Signatures]*

DISTRIBUTION

- Job Supervisor: White (retain permanently with job file)
- Responsible User: Blue (retain for 30 days)
- Radiological Monitoring: Yellow (retain for 30 days)

POST CARD AT JOB SITE

RADIOLOGICAL/HS&E WORK PERMIT

Instructions and requirements for the use of this form are contained in HS&E 6.05 Radiological/HS&E Work Permit

SECTION I - JOB INFORMATION (To be completed by job supervisor or permit initiator)

Job Name: REMODEL ACTION 881HS Auth or WO: 986147
 Date: 8-26-90 Room #: --- Date: MAR 5 1990 From: 0700 (AM/PM) To: 1630 (AM/PM)

Scope of Work: Installation (Repair) of equipment located floor and
ceiling, separate for underground elect. Conduit & grade

SECTION II - DESCRIPTION OF HAZARDS (To be completed by responsible user)

MATERIAL HAZARDS

- ☒ HNO₃ (Nitric Acid)
- ☒ HCl (Hydrochloric Acid)
- ☒ H₂SO₄ (Sulfuric Acid)
- ☒ HF (Hydrofluoric Acid)
- ☒ Caustic
- ☒ Flammables
- ☒ Trichloroethylene
- ☒ Beryllium
- ☒ Plutonium
- ☒ Uranium
- ☒ Asbestos

ELECTRICAL HAZARDS

Energized System

- ☒ Yes ☒ No
- ☒ 120V
- ☒ 220V
- ☒ 480V
- ☒ 600V
- ☒ Above 600V

- ☒ Laser Involved?
- ☒ Microwave Involved?

HIGH TEMP/HIGH PRESSURE

- ☒ Vacuum
- ☒ Ambient Pressure
- ☒ <15 psig
- ☒ >15 psig
- ☒ Below Ambient Temp
- ☒ Above Ambient Temp
- ☒ Steam System
- ☒ Hydraulic system

Fire Suppression Interruption? ☒ Yes ☒ No

Other hazards and precautions: WIND OVER 15 MPH NO OPERATIONS, OR SUCH
COMPACTOR (Full) SHALL BE IN OPERATION (Equipment)

SECTION III - RADIOLOGICAL AND NONRADIOLOGICAL SAFETY REQUIREMENTS (To be completed by Radiological Monitoring and/or HS&E Safety Engineer)

JOB SITE REVIEW REQUIRED ☒ Yes ☒ No

RADIOLOGICAL MONITORING REQUIRED ☒ YES ☒ NO

RADIOLOGICAL MONITORING PRE-JOB SURVEY

Contamination levels and extent: ---

Gamma ---
 Neutron ---
 Limitations ---

Radiological Monitor Signature: ---

RADIOLOGICAL MONITORING POST-JOB SURVEY

Contamination levels and extent: ---

Gamma ---
 Neutron ---

Radiological Monitor Signature: ---

Other Special Requirements: ---

as required for
operation of backfill
operations

ROCKY FLATS EXCAVATION PERMIT

12/13/1988

LOCATION/PROJECT TITLE/WORK DESCRIPTION: 881 N. 1st St. - 1st Floor - 1st FloorCONTRACTOR: Garcia CONTRACT DWG/SHEET NO: SK 786147 E1AUTHORIZATION NO: 186147 PERMIT NO: 30-2-22-90 DRAWING NO: E 5.1.4. E 5. E 6CAUTIONS/OBSTRUCTIONS/SPECIAL INSTRUCTIONS: 10.1LOCATOR TAPE ISSUED: _____ PERMIT LIMITS (DURATION/BOUNDARY): 4-22-90

RADIATION MONITORING SURVEY/RESULT: _____

APPROVALS

RCRA: Butler 2-22-90

POSE	PLANT POWER	UTILITIES	ALARMS SUP	TELECOM	COMM SUP	PLANT PROTECTION
<u>2-22-90</u>	<u>2-22-90</u>	<u>2-22-90</u>	<u>2-22-90</u>	<u>2-22-90</u>	<u>2-22-90</u>	<u>2-22-90</u>

FIRE DEPT.	ENVIRONMENTAL	LIQUID WASTE	IND SAFETY	BLDG SUPERINTENDENT	INDUSTRIAL HYGIENE	HSE AREA ENGR/SHIFT SUPTR
<u>2-22-90</u>	<u>2-22-90</u>	<u>2-22-90</u>	<u>2-22-90</u>	<u>2-22-90</u>	<u>2-22-90</u>	<u>2-22-90</u>

RESPONSIBLE JOB SUPERVISOR/OPERATOR: Butler 2-22-90

EXCAVATION COORDINATOR: _____ DATE: _____

INITIAL INSPECTION BY: _____ DAILY INITIALS: _____

DATE: _____

NOTES: _____

ATTACH DRAWING/SKETCH: _____

SEE REVERSE SIDE FOR ADDITIONAL INSTRUCTIONS: _____

DISTRIBUTION: _____

WHITE: CMIC-15a

BLUE: EPCB

YELLOW: HSE

CARD: JOB SITE

FF-4000 (Rev. 7/82) Supersedes Previous Issues

ROCKY FLATS EXCAVATION PERMIT

ATTACHMENT CMIC-1

12/13/19

JATION/PROJECT TITLE/WORK DESCRIPTION TREATMENT BUILDING 891
REMEDIAL ACTION 881 HILLSIDE - TEST BORINGS (4)

CONTRACTOR _____ CONTRACT DWG/SHEET NO. _____
 AUTHORIZATION NO 986147 PERMIT NO 105-9-8-89 DRAWING NO _____

CAUTIONS/OBSTRUCTIONS/SPECIAL INSTRUCTIONS. No UNDERGROUND UTILITIES

LOCATOR TAPE ISSUED _____ PERMIT LIMITS (DURATION/BOUNDARY) 11-8-89

RADIATION MONITORING SURVEY/RESULTS < 250 c/m due to background

APPROVALS

RCRA Butler

FE (PCSE)	PLANT POWER	UTILITIES	ALARMS SUP	TELECOM	COMM SUP	PLANT PROTECTION
<u>W. J. Stanton</u> 9-8-89	<u>W. J. Randall</u> 9/12/89	<u>R. E. Luyten</u> 9/11/89	<u>M. A. Hays</u> 9-11-89	<u>D. R. Hays</u> 9-11-89	<u>J. E. Hays</u> 9-11-89	<u>J. E. Hays</u> 9-8-89

FIRE DEPT	ENVIRONMENTAL	LIQUID WASTE	IND. SAFETY	BLDG. SUPERINTENDENT	INDUSTRIAL HYGIENE	HSE AREA ENGR/SHIFT SUPER
<u>C. B. Williams</u> 9-14-89	<u>M. J. Lutz</u> 9-14-89	<u>M. D. Lutz</u> 9-15-89	<u>J. Lutz</u> 9-11-89	<u>N/A</u>	<u>✓</u>	<u>9-15-89</u> <u>M. D. Lutz</u>

RESPONSIBLE JOB SUPERVISOR: Theresa Lutz
 OPERATOR: R. L. Lutz
 EXCAVATION COORDINATOR: R. L. Lutz DATE: 9-26-89

INITIAL INSPECTION
 BY _____
 DATE _____

DAILY INITIALS.
 DATE: _____

TES
 ATTACH DRAWING/SKETCH
 SEE REVERSE SIDE FOR ADDITIONAL INSTRUCTIONS

DISTRIBUTION:
 WHITE CMIC FILE
 BLUE FE (PCSE)
 YELLOW HS&E
 CARD JOB SITE

ROCKY FLATS EXCAVATION PERMIT

12/13/198

LOCATION/PROJECT TITLE/WORK DESCRIPTION: 881 HILLSIDE
BLDG 891 FOUNDATION / SLAB

CONTRACTOR: JOSE GARCIA CONST CONTRACT DWG/SHEET NO: 07507-0302
 AUTHORIZATION NO: 986147 PERMIT NO: 117-9-25-89 DRAWING NO: F-6

CAUTIONS/OBSTRUCTIONS/SPECIAL INSTRUCTIONS: EXCAVATIONS MUST COMPLY
PER OSHA 1926 EXCAVATION STANDARDS

LOCATOR TAPE ISSUED: N/A PERMIT LIMITS (DURATION/BOUNDARY) 3-15-90
1-15-90 RL

RADIATION MONITORING SURVEY/RESULTS. 42509m (bKgd) J. M. 1-15-90

APPROVALS

RCRA: Burt

FE (PCSE)	PLANT POWER	UTILITIES	ALARMS SUP	TELECOM	COMM SUP	PLANT PROTECTION
<u>9-26-89</u>	<u>1-1-90</u>	<u>1-9-89</u>	<u>1-9-90</u>	<u>1-9-90</u>	<u>1-9-90</u>	<u>1-9-90</u>

FIRE DEPT	ENVIRONMENTAL	LIQUID WASTE	IND. SAFETY	BLDG. SUPERINTENDENT	INDUSTRIAL ENGINEER	HSE AREA ENGR/SHIFT SUPER
<u>1-1-90</u>	<u>1-1-90</u>	<u>1-12-90</u> 12:00pm	<u>1-9-90</u>	<u>1-12-90</u>	<u>1-12-90</u>	<u>1-9-80</u>

RESPONSIBLE JOB SUPERVISOR: Paul A. Comstock
 OPERATOR: Paul A. Comstock
 EXCAVATION COORDINATOR: R. L. Baden DATE: 1-15-90

INITIAL INSPECTION

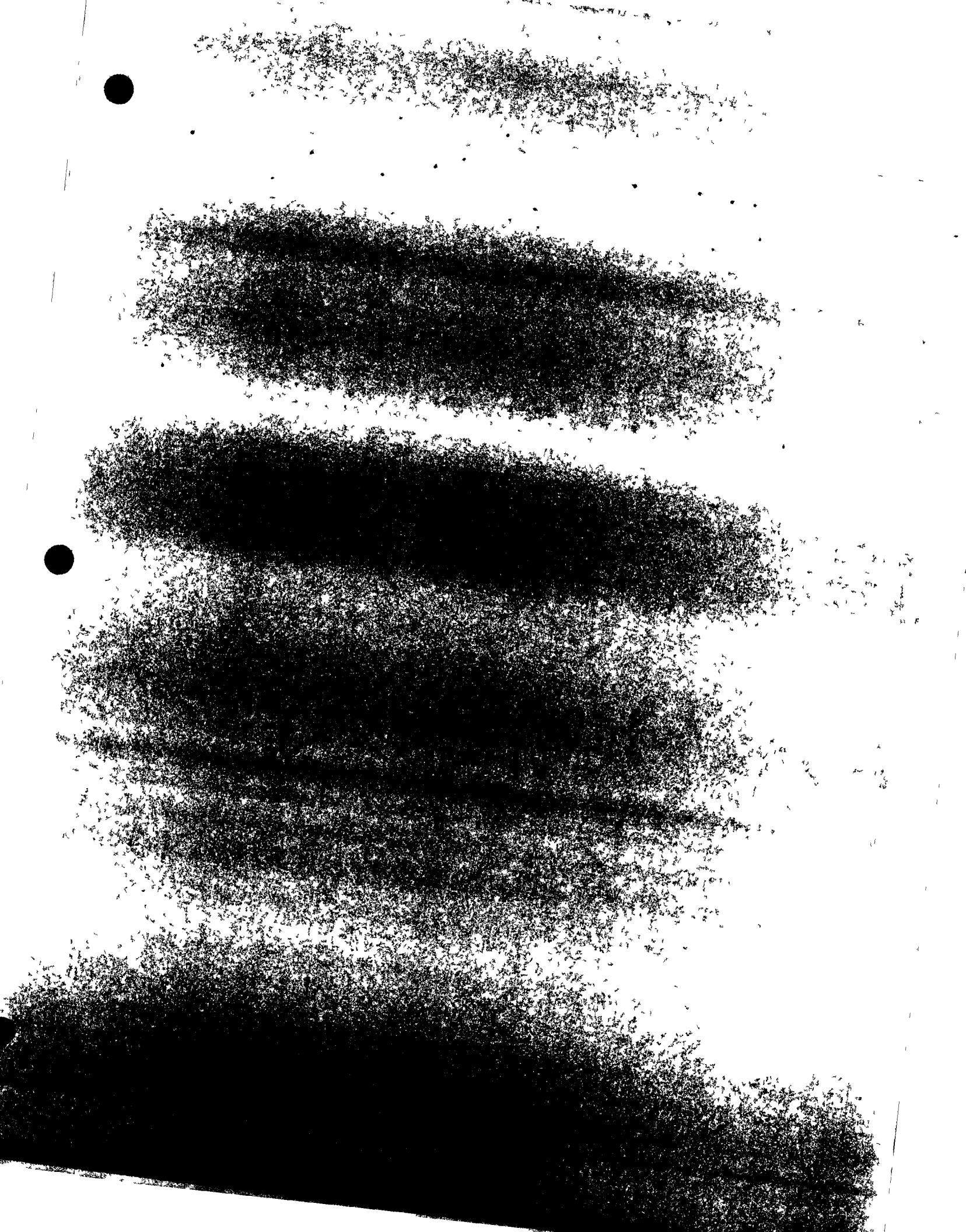
BY: _____ DAILY INITIALS: _____
 DATE: _____ DATE: _____

NOTES:

ATTACH DRAWING/SKETCH
 SEE REVERSE SIDE FOR ADDITIONAL
 INSTRUCTIONS

DISTRIBUTION:

WHITE: C.M.I.C. FILE
 BLUE: FE (PCSE)
 YELLOW: HSE
 CARD: JOB SITE



Health and Safety Plan

Section 1
Construction Work
Health and Safety Plan



INTEROFFICE CORRESPONDENCE

Date May 14, 1990 RE-DR-003
To J. P. Koffer
From B. L. Lucero, H&S Engineering, Bldg. 130, x7744 *B. L. Lucero*
Subject RESUMPTION OF GARCIA CONSTRUCTION'S "REMEDIAL ACTION 881 HILLSIDE, PHASE I", AUTHORIZATION #986147, CONTRACT #58923JK

On March 26, 1990, a Construction Notice was written to stop work on this project. Garcia Construction's employees did not have the required OSHA training, health examinations, respirator training and respirator fit tests, in order to comply with Rocky Flats Health & Safety requirements and plant policies. In addition, Industrial Safety had commented on the Accident Prevention Proposal provided by Garcia Construction, and these issues had not been addressed or resolved.

As of May 11, 1990, the contractor has completed all the necessary requirements to comply with RF rules and regulations. The items noted by Industrial Safety on the Accident Prevention Proposal have been resolved to the satisfaction of D. Burkhart of Industrial Safety. In addition, the Job Safety Analysis provided by Garcia Construction has been signed off by Industrial Safety.

The contractor has met the requirements of the HS&E Manual, Section 24.01 3.2.3.(3) and the general provisions of the construction specifications and is therefore cleared to resume construction.

The records of Garcia Constructions' employees will be kept by Construction Management (Ike Duran).

kas

Distribution

W. M. Bruniga
D. E. Burkhart
I. Duran
L. M. Grocki
J. M. Kersh
R. F. Martinez
P. J. Suniewick

Donna Hagan (Contracting Agent)
Donna Hagan 5/11/90 Accident Safety approved as corrected
Donna Hagan 11 May 90 ERO approved as corrected
APPROVALS

January 01, 1990
Contract #58923JK

ACCIDENT PREVENTION PROPOSAL

FOR

REMEDIAL ACTION 881
HILLSIDE AREA PHASE I
BUILDING 891 FOUNDATION
ROCKY FLATS PLANT

1. OBJECTIVES

- A. This proposal is to be supplemented by the Specifications Section pages 1A00-1 thru 1A00-7, and Army Corps of Engineer Manual EM 385-1-1, AND OSHA 24 CFR 1926 and 1910
- B. The information in this document, ^{AND OSHA STDS 24 CFR 1926 and 1910} is intended to be the major source for the Health, Safety and Fire Prevention Program of Jose Garcia Construction, Inc. (Contractor) It cannot be assumed that every conditional safety procedure is included or that abnormal or unusual circumstances may not require modification or additional procedures.
- C. In the event that there is a conflict between this document and Federal, State, or Local laws which apply to the work, the more stringent will apply.

2. Mandatory Requirements

- A. Safety glasses shall ^{MEET ANSI Z87.1 STDS, AND} be worn in all construction, fabricating and testing areas. Safety shoes shall also be worn when performing construction, installation or ^{MEET ANSI Z41.1 STDS, AND} inspection of any system.
- B. Hard hats shall ^{MEET ANSI Z89.1 STDS, AND SHALL} be worn in all areas, and at all times. Any visiting personnel shall also be required to wear hard hats while in the construction areas, and it is the responsibility of the Contractor and subcontractors to see that this requirement is maintained
- C. Smoking is permitted only in designated areas.
- D. No metal ladders will be allowed ^{PER SAFETY REGULATIONS} for construction or installation of any electrical work, device, or service. Metal ladders will not be allowed where there is a possibility of their coming into contact with any electrical device. All ladders shall meet ^{OSHA AND} EM 385-1-1 requirements, and their use

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shall follow manufacturers recommendations.

- E No welding, cutting, flame or spark producing equipment will be operated without specific owner permission and/or permits as may be required. A portable fire extinguisher shall be readily available to any personnel using the above equipment. All welding and/or cutting shall be stopped at least 30 minutes prior to personnel leaving the jobsite, and a fire watch shall be maintained during that time.
- F. Canvas or paper tarpaulins or drop cloths are strictly prohibited.
- G. All electrical tools must be grounded, ^{AND} ~~or~~ have ground fault interruptions.
- H. All work performed in the vicinity of high voltage power distribution and/or Buss Bar distribution shall be conducted in accordance with Section 15.1. of EM 385-1-1 AND OSHA 29 CFR 1926 and ~~PER CONTRACT REQUIREMENTS~~.
- I. All mobile cranes with cable supported booms shall be equipped with boom stops to resist the boom falling backwards. Boom stop certification must be submitted and approved along with evidence that the crane shall have installed a 'boom hoist disengaging device'. All cranes shall be load tested and ~~witnessed by Corps of Engineer personnel prior to use on this work. CRANES SHALL HAVE THEIR CERTIFICATIONS OF TESTS.~~
- J. Use of nuclear densometers must have prior approval from the COR, and permits shall be obtained, before their use. ~~PER~~

3. DEFINITIONS

- A. Supervision by the 'Contractor' shall mean the Company Management, Project Engineer, Installation Supervisor or Service Technician in the employment of Jose Garcia Construction, Inc. ~~PER CONTRACT SPECIFICATIONS~~.
- B Subcontractor shall be deemed to be any contractor, supplier, or person which has a contract with Jose Garcia Construction, Inc., and will be required to perform work, deliver material or inspect any portion of the installation or service provided on the project.
- C. The words will, shall, or must are considered to mean mandatory requirements.
- D The word should is a strong recommendation, and shall be followed if at all possible.

4. ORGANIZATION

- A ~~The~~ Mr. Paul Covarrubias will function as ^{SUPERINTENDENT AND} Safety coordinator for the project. He will be responsible for the implementation of this Accident Prevention Plan. He shall receive ~~in accordance with OSHA 29 CFR 1910.~~

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- B. Mr. Paul Covarrubias shall have the authority to correct all unsafe job conditions, and/or restrict his construction employees or subcontractors from working in unsafe areas, or in an unsafe manner. In the event that the Job Supervisor deems the project area unsafe, he will notify the Contracting Officers Representative immediately and the offices of Jose Garcia Construction, Inc. Appropriate action shall be taken to correct the unsafe condition prior to resumption of work at the project site.
- C. Prior to commencement of onsite construction, the supervisor will conduct a pre-construction safety meeting. The following personnel shall attend this meeting:
1. All subcontractor jobsite supervisors
 2. All Garcia Construction employees assigned to this project.
- D. ~~Also prior to commencing any work in any Phase (Specification Section), the subcontractor or supplier shall take part in a Quality Control Preparatory Phase Meeting. During this meeting between the Quality Control Supervisor, Mr. Thomas Buck, the Corps of Engineers representative, and the Subcontractor performing that specific phase of work, the submittals still outstanding, the permits required, procedures, and Phase Safety Plan will be discussed. The Phase Safety Plan is required from the Subcontractor for presentation at this meeting for review and comment. Its content should describe areas of work, the hazards involved with that work, and the precautions that will be implemented to avoid accidents and injury in the performance of that work. (See attached Samples). This Plan will be reviewed by all parties for proper awareness of the hazards that could arise.~~

5. IMPLEMENTATION AND TRAINING

- A. An effective system of indoctrination and education of ^{ALL PERSONNEL AND} employees in safety and loss prevention is expected of each subcontractor. Subcontractors shall inform their employees of all safety procedures before starting work on the job. Any new employees will be so instructed prior to starting work on the project. Subcontractors shall keep written records of this safety meeting.
- B. The Superintendent/Safety Coordinator, Mr. Paul Covarrubias, shall use a regular procedure of site inspection to observe and have corrected any hazardous conditions, safety rule violations and unsafe working practices. This procedure shall be adjusted to conform to project changes or new hazard development.
- C. Regular meetings will be scheduled by the Supervisor with

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all subcontractor supervisors to discuss job progress, past safety records, anticipated work requirements for work to be performed before the next scheduled meeting. These scheduled meetings will take place every Monday, 12:30 p.m. PM, at the Supervisors field offices

- D. Weekly "tool box" safety meetings of at least (5) five minutes shall be conducted by the Supervisor for all Garcia employees and any subcontractor personnel working on the jobsite at that time. Attendance is mandatory for all personnel working on the jobsite, and will be held every Monday at ~~9:00 AM~~ at the Supervisors field offices.

6. EMERGENCY PROCEDURES

A Personal Injury Accidents

1. The superintendant shall see that all injured personnel receive first aid attention immediately *By calling X2911*
2. An ambulance shall be called in any case that requires emergency help (Doctors, X-Rays, medical facilities). In case of medical emergencies, personnel will be transported to ST. ANTHONY HOSPITAL NORTH
2551 West 84th Avenue
Westminster, CO 80030
EMERGENCY ROOM TELEPHONE (303) 426-2020
3. A company vehicle may be used in lieu of an ambulance if the injury is not of a serious nature or remote jobsite location predicates this mode of transportation to save time. CAUTION!! The driver of the vehicle shall be cautioned to observe speed limits, traffic signs and drive safely to prevent a second accident. *THIS IS NORMALLY FOR FIRST AID CASES TO THE QUANT MEDICAL FAC.*

B. Chemical Exposure - *EYE WASH STATIONS SHALL BE SET UP WHEN DEALING WITH CHEMICAL*

1. In the event of chemical exposure or contact, immediately wash the eyes and/or the affected part of the body thoroughly with potable running water. Continue washing for at least (15) fifteen minutes or until medical aid arrives.
2. If illness from inhalation occurs, remove the person at once to fresh air and call for an ambulance. CAUTION!! Precaution should be taken to prevent exposure by first aid personnel, or other unaware parties

C. Fire

1. Call Fire Department *X2911*
2. The superintendant shall see that all injured personnel receive first aid attention immediately
3. Notify the Home office of Garcia Construction by telephone as soon as possible to report the incident.

D. Jobsite Emergencies

1. PREPLANNED PROCEDURES SHALL BE ESTABLISHED WITH JOBSITE

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PERSONNEL TO INSURE PROPER ACTION IN THE EVENT OF CUSTOMER OR END-USER REQUIRING EVACUATION, ALERT, OR MAJOR PLANT DISRUPTION OR DISASTER. THESE PROCEDURES SHALL BE REVIEWED WITH ALL EMPLOYEES AND SUBCONTRACTOR PERSONNEL PRIOR TO STARTING WORK ON THE PROJECT

THESE PROCEDURES HAVE BEEN DISCUSSED AT THE PRE-CONST. CONFERENCE

7. ACCIDENT REPORTING AND INVESTIGATION

- A. The superintendant shall be responsible for recording and reporting all injuries and illnesses to the home office, in accordance with Part 1904 Title 29, or O S.H.A
- B. All subcontractors shall immediately report all injuries and illnesses to the Project Supervisor.
- C. All employees shall immediately report all injuries and illnesses to their foremen or supervisor.
- D. All accidents or injuries shall be thoroughly investigated, the cause determined and appropriate action initiated to prevent the recurrence of the cause. Full documentation shall be submitted to ~~the OSH~~ and the home office of Garcia Construction.
EG&G
- E. EG & G Rocky Flats, Inc. will be notified immediately of any accident that requires medical attention, or lost time.

8. FIRST AID AND MEDICAL FACILITIES

- A. First aid kits and/or first aid stations will be furnished. A list of available area physicians, hospitals, emergency rescue services, and ambulance services, including phone numbers, will be posted in all construction areas, and will be maintained by the Project Supervisor.

9. PERSONNEL

- A. All persons employed to work on the project should be physically qualified to perform their assigned duties. No person shall be permitted to work or shall be required to work while he is physically or mentally impaired by fatigue, illness, or any other cause to a degree that he or others could be exposed to injury or a hazardous situation.
- B. Horseplay of any kind will not be tolerated.
- C. Employees shall not use unapproved shortcuts to save a few steps.

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- D. Possession or use of intoxicating beverages or narcotics while at the jobsite and/or reporting for work while still under the influence of same is strictly prohibited.
- E. An employee must have been instructed in the proper and safe use of any mechanized equipment prior to his assignment to use such equipment. He shall not operate any equipment for which he has not been previously trained.
- F. Protective Equipment
 - 1. Safety glasses are mandatory while working in, on or around any manufacturing, production, construction, or power operated equipment such as grinders, power saws, drills and brushes. They shall also be worn while installing equipment.
 - 2. Safety shoes shall be worn on all installation and movement of equipment, and during all construction activities.
 - 3. Hard hats are to be worn by all employees, subcontractors, testing personnel, delivermen while out of their vehicles, and all visitors while inside the construction area.
 - 4. Ladders mounted on an elevated platform shall not be located closer than (10) ten feet to the nearest edge unless the ladder is adequately anchored and safety belts are worn, WITH LIFE LINES.
 - 5. Special protective equipment will be determined by job conditions and may include but not be limited to goggles, gloves, special clothing, breathing apparatus, full face shields, noise control devices, etc.

10. PROJECT FACILITIES

- A. Sanitary facilities will be provided and regularly maintained at the construction site.
- B. Potable water will be available at the construction site.

11. FIRE PREVENTION

- A. The only acceptable standard on all areas of the project jobsite shall be excellent housekeeping. (See Section 12).
- B. Accumulation of trash, oily rags, combustible materials, shipping containers, and materials of similar nature will not be permitted.
- C. The area around, including under and over welding and burning operations shall be kept free of hoses, cables and flammable or combustible materials of any nature.
- D. Canvas and/or paper drop cloths and tarpaulins will not be used for protection during welding or burning.

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- E. There shall always be an adequate clearance of unrestricted passage to fire hydrants, extinguishers, hose racks, control valves and other emergency equipment.
- F. Temporary storage of any construction flammable materials must be in a location and manner approved by the Contracting Officers Representative.
- G. Flammable, corrosive or toxic materials will not be allowed in any sewer or similar waste disposal system. Proper disposal shall be arranged by the superintendent.
- H. Welding and cutting cylinders shall be secured in a vertical position and shall not be left overnight with the regulators attached. Protective caps shall be in place when these cylinders are not in use.
- I. Adequate ventilation must be provided when cleaning agents are used. Only the use of non-flammable cleaning agents will be permitted. Extra precaution is needed when chlorinated solvents are used in the presence of hot surfaces or ultra-violet rays (welding), *AND WILL BE COORDINATED WITH THE PROPER GROUPS I.D.C. Wg. ETC.*
- J. Volatile materials shall not be applied near an open flame or welding operation. If such material is to be used in a confined or poorly ventilated area, explosion proof lights and non-sparking tools shall be used.

12. HOUSEKEEPING

- A. Excellent housekeeping practices are essential to this safety program to prevent accidents, injury or fires.
- B. It shall be mandatory that all spills be cleaned up immediately.
- C. Storage of cardboard containers or other combustible material shall be in an open approved area.
- D. All scrap, combustibles, and flammable material shall be removed from the jobsite daily and be disposed of in an acceptable manner.
- E. Scrap pipe, conduit, wire, cable, etc., shall be placed in a specific container at the cutting and threading location.
- F. Dust and debris shall be contained in a manner that will prevent damage to equipment, machines and hardware already installed at the jobsite. Examples are data processing centers, tape storage vaults, telephone switch rooms machine operations, etc.

13. MATERIAL HANDLING AND STORAGE *G. SECURING OF HOSE MATERIAL AND MEETING THE PLANT REQUIREMENTS FOR WINDS PROCEEDURES.* *PER CONTRACTOR SPECIFICATIONS*

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- A. Installation supplies such as A.S.C. (Agent Storage Containers) shall be stored in an area that is not subject to vehicular traffic. They shall be stored in a manner that will prevent falling, tripping, or rolling, and shall have anti-recoil plugs and/or protective caps in place.
- B. Equipment used to move, load, unload and install brackets and A.S.C. shall be designed to adequately handle the loads required. Storage container weights and agent weights are recorded on vessel record tags attached to the container.
- C. Electrical releasing devices are to be properly identified and stored in a location accessible to only authorized personnel. A record of the lot number, date of manufacture, date of installation, location of installation and quantity shall be maintained. These records and devices shall be handled and installed by only personnel that have been properly trained in their use and installation.
- D. Conduit and pipe storage shall be in a manner and location that will prevent it from falling, rolling, or subject personnel to tripping over it and/or colliding with it.
- E. Installation supplies shall be stored in a manner that they will not be subject to falling. These supplies are frequently shipped in cardboard containers and have combustible packing; therefore, they must not be stored in an area where they may be subjected to fire or excessive heat.

14. ELECTRICAL WIRING AND APPARATUS

- A. Personnel must be ~~fully~~ ^{By their employers} qualified to work on control panels, circuits, and electrical apparatus. They must be most familiar with the manufacturers requirements and local electrical codes.
- B. Electrical installation shall be in conformance with Local, ~~and~~ National Codes applicable to the project, ^{PER TECH SPECIFICATIONS} REQUIREMENTS.
- C. Temporary electrical installation shall conform to ~~EN-305-NEC~~ ¹⁻¹ requirements, and shall have ground fault interruption, ~~or a grounded circuit~~. All devices shall conform to the manufacturers voltage ratings and configuration. Distribution boxes shall have the maximum operating voltage plainly marked on the exterior.
- D. Temporary wiring shall not be placed at an elevation or location that will subject it to vehicular traffic or any moving equipment or machinery.
- E. Work in the vicinity of high voltage lines and buss bars shall be conducted in accordance with ~~EN-305-NEC~~ Section 0544 & NEC Requirements.

Section 2
Drilling Health and Safety Plan

ADDENDUM 1 TO THE
881 HILLSIDE GEOTECHNICAL
INVESTIGATION HEALTH AND SAFETY PLAN

On March 26, 1990, the Environmental Protection Agency (EPA) conducted a performance audit of activities on the 881 Hillside Geotechnical Investigation. As a consequence, the site specific 881 Hillside Geotechnical Investigation Health and Safety plan has been modified and/or clarified. The modifications and clarifications presented herein supercede the relevant portions of the existing plan.

DUST SUPPRESSION

Under Section III A.1 of the 881 Hillside Geotechnical Investigation Health and Safety Plan, engineering control methods for suppression of dust include wetting soil during drilling operations. The need for dust suppression will be evaluated in areas where above background radioactivity is encountered by surveys conducted by EG&G Radiation Monitoring or personnel. Decisions to conduct dust suppression in these areas will be based on weather conditions at the time of drilling and an inspection of the soil for moisture. Snow cover, wet soil, or frozen soil will preclude the need for water spraying, since dust generation is minimal under these weather conditions. To date, natural soil conditions have been adequate to naturally minimize airborne dust and no areas of above background radioactivity have been encountered.

DUST MONITORING

The site specific 881 Hillside Geotechnical Investigation Health and Safety Plan calls for the use of a Mini Ram total dust monitor to assess field personnel exposure to airborne radioactive particulates. Real time radiation monitoring instrumentation capable of measuring maximum permissible concentrations (MPCs) for the radionuclides that may be encountered at the 881 Hillside site does not exist. However, a reasonable assumption can be made that the radionuclides will be attached to soil particles if they are present. Therefore, when site conditions are such that above background levels of radioactivity have been encountered and resuspension of dust is possible, water spraying will be initiated, and a real time dust monitoring program will be conducted. The action level for upgrading to level C was established using the MPCs for plutonium,

americium and uranium, DOE's Order 5480 11 and 10CFR 20 Table II MCPs are the maximum allowable release limits from an unrestricted area. If a real time dust monitoring program becomes necessary a Mini Ram will be placed at each drilling rig

RADIATION MONITORING

The use of Radiation Monitoring Equipment is described in Section IV A.1 in the 881 Hillside Geotechnical Investigation Site Specific Health & Safety Plan. Two types of radiation monitoring devices will be used during drilling activities; the GM-pancake (β , γ detection) and an α scintillometer (α particle detection). Radioactive material is generally in surface and shallow subsurface top soil. Therefore, radiation monitoring should be conducted while drilling (augering) to bedrock. As an added precaution, bedrock coring operations will also be monitored for radioactivity. Continuous monitoring during drilling is required in all areas where above background radioactivity is encountered. Readings above 3X background warrant evacuation and notification of EG&G and the Regional Health and Safety Officer. Radiation monitoring will be conducted under the guidance of the 881 Hillside Geotechnical Investigation Site Safety Officer.

HEALTH AND SAFETY TRAINING PRIOR TO FIELD ACTIVITIES

Prior to February 2, 1990, 881 Hillside drilling activities began, radiation health and safety training was given to project personnel on January 15 and 29, 1990. Radiation Health and Safety training was presented by Frank Kabot - Rocky Mountain Operations Regional Health and Safety Officer. The first two-hour session was presented on the 15th of January 1990. The agenda is included as Attachment 1 and subjects covered include radiation theory, ionizing radiation, radiation characteristics, radiation detection and units of measurement, and exposure. The second two-hour training program, given on the 29th of January, addressed instrument operation, instrument application to sample types, and instrument calibration using calibration sources.

To date, no above background radioactivity or organic vapors have been detected in the 881 Geotechnical Investigation. EG&G radiation protection personnel and Health and Safety personnel have conducted daily monitoring.

DAILY HEALTH AND SAFETY SUMMARY FORMS

In order to assist in organizing Health and Safety records of the 881 Hillside Geotechnical Site Investigation, Daily Health & Safety Summary forms shall be used. These forms contain important health & safety information which shall be documented by each drilling rig crew. Personnel working on the drill rig shall be responsible for completing the form. At the end of the day, the site Health & Safety Coordinator is responsible for consolidating each crew's form into one composite form (saving originals). The site Health & Safety Officer will then post a copy of each daily form in the field trailer and provide the EG&G Environmental Restoration field supervisor with the original daily form. Backup information (logbooks, calibration forms etc.) will be attached. Attachment 2 provides a copy of the Daily Health & Safety Summary form and the instructions for its completion.

SITE HEALTH AND SAFETY PLAN (HASP) FORM

Prepared By: T. BARRETT Date 01.08.90 WO.# 2029.33.09
FRANK T. KABOT

I. General Information

A. Project Identification

1. Division E 2. Department/Office DENVER
 4. Site Name 881 Hillside 5. Client EG & G

6. Work Location Address Greeley CO

881 Hillside Area is located on the south side of the Rocky Flats Plant security area. Well drilling locations are along the proposed trench drain. French drain will not cross over any identified site.

B. Site History

Describe briefly: The following Solid Waste Management Units have been identified in the 881 Hillside Area: Oil Slick Site, Chemical Dump Site, Liquid Dumping Site, Outfall Site, Outfall Site, Outfall Site.

C. Scope of Work

Describe briefly: GEOTECHNICAL BORINGS/SAMPLING, WELL CONSTRUCTION AND CONSTRUCTION OF FRENCH DRAIN

() Site Visit only. Site HASP not necessary. list personnel here & sign-off below:

D. Hazard Assessment and Regulatory Status

1. Indicate Yes (Y)/No (N) to types of hazards anticipated. (Y) Physio-chemical; Toxic Chemical - Levels (w) >TLV-TWA, (w) >TLV-STEL, (w) >IDLH. (M) Bio-Hazards; (Y) Radiation; () Physical; (Y) Construction type; () Industrial type; (Y) Nuclear Industry type

2. Site Regulatory Status: CERCLA/SARA - (Y) U.S. EPA, (Y) State, () NPL Site; RCRA - (Y) U.S. EPA, (Y) State; OSHA - (Y) 1910, () 1926, () State; NRC - (Y) 10 CFR 20; Other Fed. Agency - (Y) DOE, () USATHAMA, () Air Force; Based on the Hazard Assessment and Regulatory Status, determine the Standard HASP(s) applicable to this project. Indicate below which Standard Hasp will be used and append the appropriate pages of this Form along with the Standard Plan.

3. Standard Plan to be used: () Stack Test () Air Emissions () Asbestos () Industrial Hygiene () Life Systems () Hazardous Mat. () Construction () NRC/DOE () USATHAMA () Air Force

D. Review and Approval Documentation

1. Reviewed By: a. P.M. But J. Hyde
 b. P.D.
 c. DSO/RSO
 d. SHSC

Date: 29 January 1990
 Date:
 Date:
 Date:

2

Approved By: *Frank Katot*Date: *29 Jan 1990*

() a. Corporate Health and Safety Director (CHSD)

() b. DSO/RSO (Only with specific delegation by CHSD)

Project Start Date: *01-18-90* End Date: *12-31-90* This Site HASP must be Reissued/Reapproved for any activities conducted after: Date 12-31-90

Amendment Date(s) 1. 2. 3. 4. 5.

E. KEY PERSONNEL/IDENTIFICATION OF HEALTH AND SAFETY PERSONNEL**10 Key Personnel**

The following personnel and organizations are key to the activities at this site.

EPA Representatives

<u>Organization/Branch</u>	<u>Name/Title</u>	<u>Address</u>	<u>Telephone</u>
			

Roles and Responsibilities:**Other EPA Contractors & Subcontractors**

<u>Organization/Branch</u>	<u>Name/Title</u>	<u>Address</u>	<u>Telephone</u>
			

Roles and Responsibilities:

Other Regulatory Agency Representatives

<u>Organization/Branch</u>	<u>Name/Title</u>	<u>Address</u>	<u>Telephone</u>
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Roles and Responsibilities:

WESTON Representatives

<u>Organization/Branch</u>	<u>Name/Title</u>	<u>Address</u>	<u>Telephone</u>
ECN	Bert Hyde / PM		303 980 6800
	Janet Marks / Site Mgr		
	Greg Sherman / Quotach Task Mgr		
	Scott Yoshino / Site Safety Coordinator		

Roles and Responsibilities:

Bert Hyde - overall project responsibility
Janet Marks - responsible for daily project activity of field crew and subcontractors.
[Tom Barrett - Responsible for on site health & safety
Scott Yoshino -

(WESTON Subcontractors)

Organization/Branch	Name/Title	Address	Telephone
1) BOYLES BROTHERS DRILLING CO.	KARL HUGH	15865 N. 5th AVE GOLDEN, CO 80401	
2) DAVEY AND ASSOC.		96 So. Zuni St.	
3) SALAZAR		DENVER CO 80223	

Roles and Responsibilities:

- 1) **Drilling**
- 2) **GEOTECHNICAL OVERSIGHT OF DRILLING ACTIVITIES**
- 2.2 **Site Specific Health and Safety Personnel**

The SHSC for activities to be conducted at this Site is **Thomas Barrett / Scott Yoshino**

The Site Health and Safety Coordinator (SHSC) has total responsibility for ensuring that the provisions of this Site HASP are adequate and implemented in the field.

Changing field conditions may require decisions to be made concerning adequate protection programs. Therefore, the personnel assigned as SHSC's are experienced and meet the additional training requirements specified by OSHA in 29 CFR 1910.120

Qualifications:

~~Must have appropriate and relevant experience and training~~
**40 Hour OSHA Training, 8 Hour Refresher
8 hour Site Safety Coordinator, CPR & First Aid**

Designated alternatives include:

II. Health and Safety Evaluation

A. Hazard Assessment

1. **Background Review:** Complete (X) Partial () If partial, why? _____

See Attachment 1

2. Activities Covered Under this Plan

No.	Task/Subtask	Description	Schedule
09	Geotechnical Investigation of 881 Hillside Area	where French Drain will be installed. Activity includes Drilling and Geotechnical Sampling and Logging	Begin 29-1A

3. Types of Hazards: (Place a Y/N in each () to indicate presence/absence of hazard)

a. PhysioChemical ☒ Flammable () Explosive () Corrosive () Reactive ()
O₂ Rich () O₂ Deficient [1]*

Chemically Toxic ☒ Inhal. ☒ Ingest. () Cont. () Absorb. ()
Carcin. ☒ Mutagen () Terat. () OSHA 1910 1000 Substance () OSHA
Specific Hazard. Sub Standard, Describe _____

b. Biological () Etiol Agent () Other - Plant insect, animal. [2]*

c. Radiation Ionizing - () Internal Exposure ☒ External exposure [3]* Non-
ionizing - () UV, () IR, () RF; () MicroW; () LASER

d. Physical Hazards ☒ [4]* e. Construction Activities () [5]*

Drilling, heavy equipment

* The number in the [] refers to one of the following hazard evaluation forms. Complete hazard evaluation forms for each appropriate Hazard Class.

B. Source/Location of Contaminants and Hazardous Substances

1. Directly Related to Tasks

☒ Air
() Other Surface
☒ G. Water

☒ Soil
() S. Water
() Other

2. Indirectly Related to Work - Nearby Process(s) which could affect team members:

Not Applicable

() Client Facility; () Nearby Non-client Facility. Describe:

() Client briefing arranged.

[1] Chemical Hazards

- [a] Identify and attach Material Safety Data Sheets for all reagent type chemicals, solutions or other materials identified as or which in normal use could produce hazardous substances used in performing tasks related to tasks related to this project.

(X) N/A

- [b] Chemical Contaminants of Concern () N/A If present, provide following data

See Attachment 2

Hazardous Substance/ Tasks	Physical Properties and Characteristics*	Exposure Limits PEL/TLV**	Route(s) of Exposure***/ Symptoms	Monitoring Instruments/IP+ % Response
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(*) State _____

pH _____ FP _____ LEL _____ UEL _____

Auto.Ig _____ BP _____ MP _____

Incompatible with -

Sp.Gr _____ Vap.D _____

Vap.P _____ H2O Sol. _____

Oth. _____

(*) State _____

pH _____ FP _____ LEL _____ UEL _____

Auto.Ig _____ BP _____ MP _____

Incompatible with -

Sp.Gr _____ Vap.D _____

Vap.P _____ H2O Sol. _____

Oth. _____

* E = Explosive, F = Flammable, C = Corrosive, R = Reactive, W = Water reactive, O = Oxidizer, Ra = Radioactive. State = Normal physical state at site/proj temp.

**** Use lowest of two, if no TLV/PEL, use Toxicity data in following order: Lowest Toxic Conc. in humans (LTC-HMN), Lowest Lethal Conc. in humans (LLC-HMN), Lowest Toxic Dose in humans (LTD-HMN), Lowest Lethal Dose in humans (LLD-HMN), LC₅₀ or LD₅₀ in humans, the Lowest Toxic Concentration or Lowest Toxic Dose in animals, the lowest LC₅₀ or LD₅₀ in animals.**

***** I = Inhalation, G = Ingestion, S = Skin Absorption, C = Contact, D - Direct Penetration**

**+ [1] P = Ionization Potential
Chemical Hazards**

**(a) Identify and attach Material Safety Data Sheets for all reagent type chemicals, solutions or other materials identified as or which in normal use could produce hazardous substances used in performing tasks related to tasks related to this project.
() N/A**

(b) Chemical Contaminants of Concern () N/A If present, provide following data.

Hazardous Substance/ Tasks	Physical Properties and Characteristics*	Exposure Limits PEL/TLV**	Route(s) of Exposure***/ Symptoms	Monitoring Instruments/IP+ % Response
---------------------------------------	---	--	--	--

(*) State _____

pH _____ FP _____ LEL _____ UEL _____

Auto.Ig _____ BP _____ MP _____

Incompatible with -

Sp.Gr _____ Vap.D _____

Vap.P _____ H2O Sol. _____

Oth. _____

(*) State _____

pH _____ FP _____ LEL _____ UEL _____

Auto.Ig _____ BP _____ MP _____

Incompatible with -

Sp.Gr _____ Vap.D _____

Vap.P _____ H2O Sol. _____

Oth. _____

* E = Explosive, F = Flammable, C = Corrosive, R = Reactive, W = Water reactive, O = Oxidizer, Ra = Radioactive. State = Normal physical state at site/proj. temp.

** Use lowest of two, if no TLV/PEL, use Toxicity data in following order: Lowest Toxic Conc. in humans (LTC-HMN), Lowest Lethal Conc. in humans (LLC-HMN), Lowest Toxic Dose in humans (LTD-HMN), Lowest Lethal Dose in humans (LLD-HMN), LC₅₀ or LD₅₀ in humans, the Lowest Toxic Concentration or Lowest Toxic Dose in animals, the lowest LC₅₀ or LD₅₀ in animals.

*** I = Inhalation, G = Ingestion, S = Skin Absorption, C = Contact, D - Direct Penetration

+ IP = Ionization Potential
[2] Biological Hazards Of Concern

None

No. Hazard	(Y/N)	Task No.(s)*	Location/ Source (K,S)**	Route of Exposure (I,G,C,D)+	Team Member(s) Allergic?	Immunization Required?
1. Poisonous Plants ()						
2. Insects ()						
3. Snakes, Reptiles ()						
4. Animals ()						
5. Sewage ()						
6. Etiologic Agents () (List)						

* List all task Nos. which would involve potential exposure to these hazard(s)

** K = Known, S = Suspect. + I = Inhalation, G = Ingestion, C = Contact, D = Direct Penetration (Bite, Inject., Open wound or sore)

[3] Radiation Hazards of Concern

TYPE

*DOE Order 5480.11
10CFR 20 Table 11*

1. Ionizing

Radionuclide	Location/ Source	Type Emitter	Task No.(s)	Air MPC μ Ci/cc Exposure Limits	Protection Protocol Reference
--------------	------------------	--------------	-------------	---	-------------------------------------

Pu 238,239,240 soil α , gamma 09 2×10^{-12}

Am 241 soil α , gamma 09 2×10^{-12}

*U 238 soil α , gamma 09 2×10^{-11} (DOE)
electron 3×10^{-12} (10CFR)*

2. Non-ionizing

N/A

Radionuclide	Location/ Source	Type Emitter	Task No.(s)	Exposure Limits	Protection Protocol Reference
Ultra Violet					
Infra Red					
Microwave					
Radio-Freq.					
LASER					

[4] Physical Hazards of Concern

	Hazard (Y/N)	Task No.(s)	Protection OP(s) Attached
1. Noise	((
2. Heat - ambient air	((
- Hot Process - Steam	((
- Hot Process - LT3	((
- Hot Process - Incin.	((
3. Cold	((
4. Rain	((09	
5. Snow	((
6. Electric Storms	((
7. Confined Space Entry	((
8. "Hot Work"	((
9. Heavy Manual Lifting/Moving	((1	
10. Rough Terrain	((1	
11. Housekeeping	((
12. Structural Integrity	((
13. Neighborhood	((
14. Remote Area	((
15. Compressed Gases	((
16. Diving	((
17. Using Boats	((
18. Working over Water	((
19. Traffic	((
20. Explosives	((
21. Heavy Equipment Operation	((1	
22. Lifting Equipment Operation.	((1	
- Cranes,	((
- Manlifts	((
23. Working at Elevation	((
24. Using Ladders	((
25. Using Scaffolding	((

	Hazard (Y/N)	Task No (s)	Protection OP(s) Attached
26. Excavating/Trenching	()		
27 Materials Handling	()		
28. Haz. Mat. Use/Storage - flam.liq./gases	()		
- oxidizers	()		
- corrosives	()		
29. Fire Prevent/Reponse plan required	()		
30. Fire Extinguishers required	()		
31 Demolition	()		
32. Utilities - Underground	()		
- Overhead	()		
33. Electrical - General	()		
- High Voltage	()		
34 Welding/cutting/burning	()		
35. Hand tools	()		
36 Power Hand Tools	()		
37 High Pressure Water	()		
38 Other <u>Drilling Hazards</u>	()		
39 Other _____	()		
40 Other _____	()		

TASK BY TASK RISK ANALYSIS

The preceding Tables identify the hazards known or suspected to be present in accomplishing the tasks involved in this project.

Section II A 2. of this HASP describes the background of this site/project and identifies the tasks involved.

Below briefly describe each task and the likelihood of exposure to the hazards identified and the protective protocols to be used.

1 Drilling and geotechnical logging will be performed along the proposed location of the french drain. No drilling will take place in the identified SWMUs. Work will be performed in Level D (modified)

III. Personnel Protection Plan

A. Engineering Controls

1. Describe Engineering Controls used as part of Personnel Protection Plan.

Task(s)

09 Dust suppression will be accomplished by wetting soil during drilling operations.

B. Administrative Controls

1. Describe Administrative controls used as part of Personnel Protection Plan:

Task(s) All personnel will have OSHA training and medical certification,

C. Personnel Protective Equipment

1. Action Levels for Changing Levels of Protection

(1) Task No.(s) Define Action Levels for up or down grade for each task *IN THE BREATH ZONE*
 09 Any REMAINING ABOVE BACKGROUND will RESULT IN UPGRADE TO LEVEL 2. REMAINING ENCOUNTERED ABOVE 5 UNITS IN THE BREATHING ZONE WILL RESULT IN UPGRADE TO LEVEL 2.

c. Description of Levels

Task(s)	09	
	Level D	Level D
Head	HAZMAT	()
Eye & Face	SAFETY GLASSES WITH SIDE SHIELDS	()
Hearing	()	()
Arms & Legs only	()	()
Whole Body Apron	TYNEX COVERALLS	() ()
Hand - gloves	COTTON WORK GLOVES	()
- gloves	()	()
- gloves	()	()
Foot - Boots	SAFETY SHOES	()
- Boots	BOOT COVERS	()
- Boots	()	()

Task(s)

09

Level CLevel

Head

* Hard Hat

Eye & Face

* Safety Glasses

()

Hearing

()

()

Arms & Legs only

()

()

Whole Body
Apron

* Tyvek Coveralls

()

()

Hand - gloves

* Cotton work gloves/liners

- gloves

* Nitrile outer gloves

- gloves

()

()

()

Foot - Boots

* Safety Boots

- Boots

* Boot Covers

- Boots

()

()

()

()

APR - Neg. Pres.
Half Face

5'

()

()

()

Cart./Canister

1

()

Full Face

*

()

Cart./Canister

* GMC-M

()

PAPR

()

()

Cart./Canister
Type C

()

()

SAR - Airline

()

()

SCBA

()

()

Comb. Airline/SCBA

()

()

Cascade Syst.

()

()

Compressor

()

()

Fall Protection

()

()

Floatation

()

()

Task(s)	Level __	Level __
Head	()	()
Eye & Face	()	()
Hearing	()	()
Arms & Legs only	()	()
Whole Body	()	()
Apron	()	()
Hand - gloves	()	()
- gloves	()	()
- gloves	()	()
Foot - Boots	()	()
- Boots	()	()
- Boots	()	()
APR - Neg. Pres.	()	()
Half Face	()	()
Cart./Canister	()	()
Full Face	()	()
Cart./Canister	()	()
PAPR	()	()
Cart./Canister	()	()
Type C	()	()
SAR - Airline	()	()
SCBA	()	()
Comb. Airline/SCBA	()	()
Cascade Syst.	()	()
Compressor	()	()
Fall Protection	()	()
Floatation	()	()

IV Site or Project Hazard Monitoring Program

A. Direct Reading Air Monitoring Instruments

1 Instrument Selection & Initial Check Record

All instruments will be calibrated daily prior to being taken into the field

No.	Task No.(s)	Instrument Checked Upon Receipt	Initials
CGI	()		
O2	()		
CGI/O2	()		
CGI/O2/tox-PPM,H2S,H2S/CO	()		
RAD-GM, <i>Pancake</i>	<input checked="" type="checkbox"/>		
- NaI	()		
- ZnS <i>α, scintillator</i>	<input checked="" type="checkbox"/>		
- OTHER _____	()		
PID	()		
- HNU 10.2	<input checked="" type="checkbox"/>		
- HNU 11.7	()		
- HNU 95,	()		
- PHOTOVAC,TMA,OTHER	()		
FID	()		
- FOX-128	<input checked="" type="checkbox"/>		
- FOX 128GC	()		
- HEATH,AID,OTHER _____	()		
RAM, Mini-RAM, Other _____	<input checked="" type="checkbox"/>		
MONITOX-HCN	()		
H2S	()		
COCL,	()		

The OVA 128 will be used in lieu of PID when atmospheric humidity make the PID unusable

- ☒ 4. Fixed stations
☒ 5. Other: *Drilling Site*

Air Monitoring Instrument: *PID/FID*

Air Monitoring Frequency

Tasks *09*

- ☐ 1. Periodically
☐ 2. Periodically
☒ 3. Continuous
☐ 4. Other:

Monitoring Locations

Tasks *07*

- ☐ 1. Upwind/downwind of site activities.
☐ 2. Near residents, etc.
☐ 3. Key site activity locations:
 ☐ decon area
 ☐ staging area
 ☐ excavation area
 ☐ field lab area
 ☐ storage tanks
 ☐ lagoons
 ☐ Drums
☒ 4. Fixed stations
☒ 5. Other: *Drilling Site*

D. Action Levels

<input type="checkbox"/> 1. Explosive atmosphere:	Tasks:
<u>Action Level</u>	<u>Action</u>
<10% LEL	Continue investigation
10%-25% LEL	Continue on-site monitoring with extreme caution as higher levels are encountered.
>25% LEL	Explosion hazard. Withdraw from area immediately.
<input type="checkbox"/> 2. Oxygen:	Tasks:
<u>Action Level</u>	<u>Action</u>
<19.5%	Monitor wearing SCBA.
19.5%-25%	NOTE: Combustible gas readings may not be valid in atmospheres with <19.5% oxygen. Continue investigation with caution, as Oxygen levels > 21% require extreme caution. Other than normal level may be due to presence of other substances.

>25%

Fire hazard potential. Stop work and Consult a fire safety specialist.

X

3. Radiation:

Tasks: 09

Action Level

Action

3 x Bkg - <2 mR/hr

Radiation above background levels (normally 0.01-0.02 mR/hr) signifies possible source(s) radiation present.

Continue investigation with caution. Perform thorough monitoring. Consult with a health physicist.

> 2 mrem/hr

Potential radiation hazard. Evacuate site. Continue investigation only upon the advice of a health physicist.

X

4. Organic gases and vapors:

> Background (level C) < 5 unit

5. Inorganic gases and vapors:

Action Level

Action

Depends on chemical

Consult standard reference manuals for air concentration/toxicity data. Action level depends on PEL/REL/TLV.

These Action Levels, if not defined by regulation, is some percent (usually 50%) of the applicable PEL/REL/TLV. That number must also be adjusted to account for instrument response factors.

Ambient Air Sampling - Decision Logic and action levels to institute Air Sampling

___ No air sampling is required on this site.

X An air sampling plan is incorporated in this HASP

Check situations which will require or action levels which will apply to deciding to institute or increase scope of planned air sampling.

Meteorological conditions:

- ___ a. Dry weather for ___ days.
- ___ b. ambient temperature above ___ °F.

X

- c. Wind increasing potential of more contaminant dispersion in or migration out of controlled area.

Work will cease when wind speed exceeds safe level as determined by Site Manager or RFP (35 mph)

Activities which will require instituting or increasing scope of air sampling:

- ___ a. major spills
- ___ b. new site activity resulting in potential presence of new chemical hazards.
- ___ c. site activity increases airborne contaminants possibilities.

d. Air sampling documentation required for:

☐ Downgrading from stipulated level of protection.

☐ Documenting no migration of contaminants off site through air

Applicable Action Levels for instituting Air Sampling: (Check as Appropriate)

- ☒ a. Visible vapor/gas clouds or vapors levels, or
- ☒ b. Visible dust or particulate levels measured with Direct Reading Instrument, two - three times background or above action level, sustained over 10-15 minute period.
- 1) Sampling Matrix/air interface - Monitor matrix/air interface and breathing zone periodically with DRI, if Vapor levels > 2-3 times background, monitor continuously, follow No. 4.
- 2) Container opening - Monitor opening and breathing zone periodically with DRI, if Vapor levels > 2-3 times background, monitor opening and breathing zone continuously, follow No. 4.
- 3) Excavation/Drilling/Intrusive work - Monitor at ground level and breathing zone periodically with DRI, if Vapor levels > 2-3 times background, monitor opening and breathing zone continuously, follow No. 4
- 4) Breathing zone - Ensure level of protection specified in HASP is being used Consult HASP or Corporate Health and Safety relative to instituting personnel, area or perimeter Sampling.

Other:

B Sample Location

☐ 1. Ambient background - Locations: Substances Sampled for

- a.
b.

☐ 2. Personal samples, on-site - Locations

- a.
b.
c.
d.
e.
f.

☐ 3. Personal samples, off-site - Locations

- a.
b.
c.
d.

— 4. Fixed on-site samples - Locations:

- a.
- b.
- c.
- d.
- e.
- f.

— 5. Fixed off-site samples - Locations:

- a.
- b.
- c.
- d.
- e.

— 6. Mobile off-site samples - Locations:

- a.
- b.
- c.

— 7. Mobile on-site samples - Locations:

- a.
- b.
- c.

— 8. Background sample stations - Locations

- a.
- b.
- c.

B. Air Sampling

1. Personal Sampling Pumps - Gilian,SKC,MSA No. ()

Sampling Media - Sorbent Tubes

<u>Task(s)</u>	<u>Location</u>	<u>Duration</u>	<u>Frequency</u>	<u>Type</u>	<u>Anal. Meth.</u>
----------------	-----------------	-----------------	------------------	-------------	--------------------

Sampling Media - Filter

<u>Task(s)</u>	<u>Location</u>	<u>Duration</u>	<u>Frequency</u>	<u>Type</u>	<u>Anal. Meth.</u>
----------------	-----------------	-----------------	------------------	-------------	--------------------

Sampling Media - Impinger

<u>Task(s)</u>	<u>Location</u>	<u>Duration</u>	<u>Frequency</u>	<u>Type</u>	<u>Anal. Meth.</u>
----------------	-----------------	-----------------	------------------	-------------	--------------------

Sampling Media - Air Bag

<u>Task(s)</u>	<u>Location</u>	<u>Duration</u>	<u>Frequency</u>	<u>Type</u>	<u>Anal. Meth.</u>
----------------	-----------------	-----------------	------------------	-------------	--------------------

B. Air Sampling

1. ⁴⁻⁵Personal Sampling Pumps - Gilian,SKC,MSA No. ()

Sampling Media - Sorbent Tubes

<u>Task(s)</u>	<u>Location</u>	<u>Duration</u>	<u>Frequency</u>	<u>Type</u>	<u>Anal. Meth.</u>
----------------	-----------------	-----------------	------------------	-------------	--------------------

Sampling Media - Sorbent Tubes (cont.)

<u>Task(s)</u>	<u>Location</u>	<u>Duration</u>	<u>Frequency</u>	<u>Type</u>	<u>Anal. Meth.</u>
----------------	-----------------	-----------------	------------------	-------------	--------------------

Sampling Media - Filter

<u>Task(s)</u>	<u>Location</u>	<u>Duration</u>	<u>Frequency</u>	<u>Type</u>	<u>Anal. Meth.</u>
----------------	-----------------	-----------------	------------------	-------------	--------------------

2. Hi-Volume Pumps

Sampling Media - Filter

<u>Task(s)</u>	<u>Location</u>	<u>Duration</u>	<u>Frequency</u>	<u>Type</u>	<u>Anal. Meth.</u>
----------------	-----------------	-----------------	------------------	-------------	--------------------

3. Portable Gas Chromatograph Task(s): Type:

Portable GC Analytical Plan:

4. Passive Dosimeters

	Task(s)	Type	Location	Frequency	Duration
Organic Vapor	()				
Mercury Vapor	()				
Paper Color Change	()				
TLD	()				
Film Badge	()				
Liquid Media	(-)				

5 Wipe Sampling

a. Wipe Sampling Plan

C. Physical Hazard and Miscellaneous Monitors and Detectors

	Task(s)	Calibration RQD? Method	Location	Frequency
SOUND LEVEL METER	()	()		
NOISE DOSIMETER(s)	()	()		
OCTAVE BAND ANALYER	()	()		
LIGHT METER	()	()		
ELECTRIC CIRC. DETECTOR	()	()		
Thermometer	()	()		

	Task(s)	Calibration RQD? Method	Location	Frequency
Wind Speed Indic.	()	()		
Barometer	()	()		
Psychrometer	()	()		
Infra Red Thermom.	()	()		
Micro Wave Detector	()	()		
pH METER	()	()		

D. Indicator Kits

	Task(s)	Location	Frequency
pH PAPER	()		
PEROXIDE PAPER	()		
CHLOR-N-OIL KIT	()		
HAZARD CATAGORIZING KIT	()		
ASBESTOS TEST KIT	()		

G. Work Location Instrument Readings

Location.

% LEL _____ % O₂ _____ PID ppm _____

FID ppm _____ Aerosol Monitor mg/M³ _____

GM: Shield Probe/Thin Window - mR/hr _____ cpm _____

NaI _____ uR/hr; ZnS _____ cpm

(Monitox)ppm: () _____; () _____;

() _____; () _____;

(Detector Tube)(s): () _____; () _____;

() _____; () _____; () _____

Sound Levels ____dBA; ____dBA; ____dBA; ____dBA; ____dBA; ____dBA; ____dBA; ____dBA

Illumination ____ pH ____ Other ____ Other ____ Other ____

Location _____

% LEL _____ % O₂ _____ PID ppm _____

FID ppm _____ Aerosol Monitor mg/M³ _____

GM Shield Probe/Thin Window - mR/hr _____ cpm _____

NaI _____ uR/hr; ZnS _____ cpm

(Monitox)ppm: () _____; () _____

() _____ () _____

(Detector Tube)(s): () _____ () _____

() _____ () _____ () _____

Sound Levels _____ dBA, _____ dBA, _____ dBA, _____ dBA, _____ dBA, _____ dBA, _____ dBA, _____ dBA

Illumination _____ pH _____ Other _____ Other _____ Other _____

IV DECONTAMINATION PLAN

1. Personnel Decontamination

Section III C. lists the tasks and specific levels of protection required for each. Consistent with the levels of protection required, step by step procedures for personnel decontamination for each Level of Protection are attached.

2. Levels of Protection Required for Decontamination Personnel

The levels of protection required for personnel assisting with decontamination will be (_____ Level B, _____ Level C, X Level D).

--- (CHECK) Modifications include: SARINEX COVERALS, NITRILE GLOVES, HARD HAT w/
SPLASH PROTECT, BOOT COVERS

3. Disposition of Decontamination Wastes

(Provide a description of waste disposition including identification of storage area, hauler, and final disposal site if applicable.)

DRILL RIGS AND OTHER HEAVY EQUIPMENT WILL BE DECONTAMINATE
AT THE WESTON DECONT. PAD. LIQUID AND SLUDGE WASTES WILL
BE REMOVED BY THE CLIENT. DISCARDED PPE WILL BE SCREENED FOR

4. Equipment Decontamination RADIOACTIVITY PRIOR TO LAUNCHING

ORE WILL BE WASHED CLEAR OR-14

A procedure for decontamination steps required for non-sampling equipment and heavy machinery follows

5. Sampling Equipment Decontamination

Sampling equipment will be decontaminated in accordance with the following procedure:

SAMPLING EQUIPMENT WILL BE SCREENED FOR RADIOACTIVITY PRIOR TO LEAVING THE SITE. DECONTAMINATION WILL TAKE PLACE AT THE DECON FACILITY

V Contingencies

A. Emergency Contacts and Phone Numbers

<u>Agency</u>	<u>Contact</u>	<u>Phone Number</u>
Local Medical Emergency Facility	Rocky Mts Medical	(303) 966-2111
WESTON Medical Emergency Contact	AGATHA	(513) 421-3063
WESTON Health and Safety, LAKEWOOD, CO		(215) 430-7406 303 980 68
Fire Department	ON SITE SERVICE	(303) 966-2111
Police Department		
On Site Coordinator	Tom GENTONARD	(303) 966-7041
Site Telephone		(303) 966 5355
Nearest Telephone	GUARD STATIONS	

B. LOCAL MEDICAL EMERGENCY FACILITY(S)

1. Primary

Name of Hospital: ST. ANTHONY NORTH

Address: 2552 WEST 84th AVE.

Phone No 399-1211

Name of Contact ROCKY MTS MEDICAL

Phone No 966-2911

Type of Service - Physical Trauma only () Chemical Exposure only () Physical Trauma & Chemical Exposure (X) Available 24 Hours (X)

Route to Hospital: (Attach Map)

MEDICAL FACILITIES ARE AVAILABLE ON MAIN SITE; IF FURTHER TREATMENT IS NECESSARY, ROCKY MTS AMBULANCES WILL BE USED IN AN EXTREME EMERGENCY ST. ANTHONY FLIGHT FOR LIFE HELICOPTER WILL BE USED.

Travel Time From Site (Minutes):

Distance to Hospital (Miles):

Name/No. of 24 Hr. Ambulance Service: 2911

2. Secondary or Specialty Services Provider

Name of Hospital:

Address:

Phone No

Name of Contact

Phone No.

Type of Service - Physical Trauma only () Chemical Exposure only () Physical Trauma & Chemical Exposure () Available 24 Hours ()

Route to Hospital: (Attach Map):

Travel Time From Site (Minutes):

Distance to Hospital (Miles):

Name/No. of 24 Hr. Ambulance Service:

V Contingencies (Continued)

C. Response Plans

1 Medical - General

2. Special First Aid Procedures
Hydrofluoric acid on site (W)Y/N

Cyanides on site (W)Y/N

a. First Aid Kit - Type Location

*ALL FIELD TEAMS ARE EQUIPPED WITH A BASIC FIRST AID KIT
AND A FIELD RADIO FOR CONTACT WITH WESTON BASE OPERATIONS
AND ROCKY PLATE EMERGENCY SERVICE*

b Eyewash required (W)Y/N

Location Location

c. Safety Shower (N)Y/Y

Location Location

3. Plan for Response to
Fire/Explosion

*CONTACT ROCKY PLATE
FIRE PROTECTION
SERVICE*

4. Fire extinguisher

a. Type

b. Location

*ALL FIELD TEAMS ARE
EQUIPPED WITH FIRE
EXTINGUISHERS*

5. Plan for Response to Spill/Release 6. Spill Response Gear

Description	Location
CONTACT ROCKY FLATS HAZ MAT RESPONSE UNIT.	

6. Plan for Response to Security Problems

CONTACT ROCKY FLATS PLANT SECURITY

VI. Site Personnel and Certification Status

A. WESTON

Name	Title	Task(s)	Medical Current a.	Fit Test Current		Training Current c.	Certification Level or Description
				Qual. b.	Quant. b.		
1. Bert Hyde	Project Manager	09					B-S
2. Greg Sherman	Geotech Task Mgr						
3. Vana Marks	Site Manager						B-T
4. Ken Miller							B-T
5. Jeffrey Herrick							B-S
6. Tony Melon							B-T
7. Rick Morrow							B-T
8. Scott Parker							
9. Kathy Keryluk							
10. Kris Hemlein							B-T
Site Health and Safety Coordinator (SHSC)							C-S
11. Tom Barrett							B-T
11. Scott Yoshino							B-T

(a) Training - All personnel, including visitors, entering the exclusion or contamination reduction zones must have certifications of completion of training in accordance with OSHA 29 CFR 1910.29, CFR 1926/1910 or 20 CFR 1910.120.

(b) Respirator Fit Testing - All persons, including visitors, entering any area requiring the use or potential use of any negative pressure respirator must have had as a minimum, a qualitative fit test, administered in accordance with OSHA 20 CFR 1910.134 or ANSI within the last 12 months. If site conditions require the use of a full face negative pressure, air purifying respirator for protection from Asbestos or Lead, employees must have had a quantitative fit test, administered according to OSHA 20 CFR 1910.1002 or 1025 within the last 6 months.

(c) Medical Monitoring Requirements - All personnel, including visitors, entering the exclusion or contamination reduction zones must be certified as medically fit to work, and to wear a respirator, if appropriate, in accordance with 29 CFR 1910, 20 CFR 1926/1910 or 29 CFR 1910.120.

The Site Health and Safety Coordinator is responsible for verifying all certifications and fit tests.

VI. Site Personnel and Certification Status

A. WESTON

Name	Title	Task(s)	Medical Current a.	Fit Test Current		Training Current c.	Certification Level or Description
				Qual. b.	Quant. b.		
1. Frank Kabot							C-S/B-T
2. Robert Crayton							B-T
3.							
4.							
5.							
6.							
7.							
8.							
9.							
10.							
Site Health and Safety Coordinator (SHSC)							
11.							

(a) Training - All personnel, including visitors, entering the exclusion or contamination reduction zones must have certifications of completion of training in accordance with OSHA 29 CFR 1910.29, CFR 1926/1910 or 20 CFR 1910.120.

(b) Respirator Fit Testing - All persons, including visitors, entering any area requiring the use or potential use of any negative pressure respirator must have had as a minimum, a qualitative fit test, administered in accordance with OSHA 20 CFR 1910.134 or ANSI within the last 12 months. If site conditions require the use of a full face negative pressure, air purifying respirator for protection from Asbestos or Lead, employees must have had a quantitative fit test, administered according to OSHA 20 CFR 1910.1002 or 1025 within the last 6 months.

(c) Medical Monitoring Requirements - All personnel, including visitors, entering the exclusion or contamination reduction zones must be certified as medically fit to work, and to wear a respirator, if appropriate, in accordance with 29 CFR 1910, 20 CFR 1926/1910 or 29 CFR 1910.120.

The Site Health and Safety Coordinator is responsible for verifying all certifications and fit tests.

B. Subcontractor's Health and Safety Program Evaluation

Name and address of subcontractor:

Boyles Brothers, 15865 West 5th Ave., Golden, CT

Activities to be conducted by subcontractor:

Borehole Drilling & Well Construction

EVALUATION CRITERIA

Item	Acceptable	Unacceptable	Comments
Medical Program meets OSHA/WESTON Criteria	()	()	_____
Personal Protective Equipment Available:			_____
a. meets OSHA criteria,	()	()	_____
b. is as specified in WLHASP	()	()	_____
On-Site Monitoring Equipment Available,			
Calibrated and Operated Properly	()	()	<i>Weston Supplied</i>
Safe Working Procedures Clearly Specified	()	()	<i>Weston HASP</i>
Training meets OSHA/WESTON Criteria	()	()	
Emergency Procedures	()	()	<i>Weston HASP</i>
Decontamination Procedures	()	()	<i>Weston HASP</i>
General Health and Safety Program Evaluation	()	()	_____

Additional Comments:

Evaluation conducted by:

Date:

C. Subcontractor

Name	Title	Task(s)	Medical Current a.	Fit Test Current		Training Current c.	Certification Level or Description
				Qual. b.	Quant. b.		
<i>1. Doyle Styles, Drilling Foreman</i>							
2.							
3.							
4.							
5.							
6.							

B. Subcontractor's Health and Safety Program Evaluation

Name and address of subcontractor:

Salazar, Broomfield CO
8791 Wolff Court, Suite 220

Activities to be conducted by subcontractor:

EVALUATION CRITERIA

Item	Acceptable	Unacceptable	Comments
Medical Program meets OSHA/WESTON Criteria	()	()	
Personal Protective Equipment Available:			
a. meets OSHA criteria,	()	()	
b. is as specified in WLHASP	()	()	
On-Site Monitoring Equipment Available,			
Calibrated and Operated Properly	()	()	<i>Weston Supplied</i>
Safe Working Procedures Clearly Specified	()	()	<i>Weston HASAP</i>
Training meets OSHA/WESTON Criteria	()	()	
Emergency Procedures	()	()	<i>Weston HASAP</i>
Decontamination Procedures	()	()	<i>Weston HASAP</i>
General Health and Safety Program Evaluation	()	()	

Additional Comments:

Evaluation conducted by:

Date:

C. Subcontractor

Name	Title	Task(s)	Medical Current a.	Fit Test Current		Training Current c.	Certification Level or Description
				Qual. b.	Quant. b.		
1. <i>Brian Ribyl</i>	<i>Geotech</i>	<i>09</i>					
2.							
3.							
4.							
5.							
6.							

B. Subcontractor's Health and Safety Program Evaluation

Name and address of subcontractor:

Chen Associates, 96 South Zuni Street, Denver

Activities to be conducted by subcontractor:

Geotechnical Support

EVALUATION CRITERIA

Item	Acceptable	Unacceptable	Comments
Medical Program meets OSHA/WESTON Criteria	()	()	
Personal Protective Equipment Available:			
a. meets OSHA criteria.	()	()	
b. is as specified in WLHASP	()	()	
On-Site Monitoring Equipment Available, Calibrated and Operated Properly	()	()	<i>Weston Supplied</i>
Safe Working Procedures Clearly Specified	()	()	<i>Weston HASP</i>
Training meets OSHA/WESTON Criteria	()	()	
Emergency Procedures	()	()	<i>Weston HASP</i>
Decontamination Procedures	()	()	<i>Weston HASP</i>
General Health and Safety Program Evaluation	()	()	

Additional Comments:

Evaluation conducted by:

Date:

C. Subcontractor

Name	Title	Task(s)	Medical	Fit Test		Training	Certification
			Current	Current	Quant.		
			a.	b.	b.	c.	Level or Description
1. <i>Steve Carpenter, Geologist</i>							
2.							
3.							
4.							
5.							
6.							

VII. HEALTH AND SAFETY PLAN APPROVAL/SIGN OFF FORMAT

1. Site Name

881 Hillside

2. WO# 2029.33.09

Work Location Address:

Rocky Flats Plant, Golden, CO

I have read, understood, and agreed with the information set forth in this Health and Safety Plan (and attachments) and discussed in the Personnel Health and Safety briefing.

Site Safety
Co-ordinator

Scott T. Yoshida

Signature

Scott T. Yoshida

Date 1-30-90

Frances McDermott

Name

Frances McDermott

Signature

1-30-90

Date

Scott Parker

Name

Scott C. Parker

Signature

1-30-890

Date

Robert C. Crayton

Name

Robert Crayton

Signature

1-30-90

Date

Scott T. Yoshida

Name

Scott T. Yoshida

Signature

1-30-90

Date

Janet E. Moran

Name

Janet E. Moran

Signature

1-30-90

Date

Paul C. Bismarck

Name

Paul C. Bismarck

Signature

1-30-90

Date

Jeffrey F. Herrick

Name

Jeffrey F. Herrick

Signature

1/30/90

Date

Daryl L. Lipp

Name

Daryl L. Lipp

Signature

2-2-90

Date

Darlene Baday

Name

Darlene Baday

Signature

2-5-90

Date

Robert Sengebusch

Name

Robert M. Sengebusch

Signature

2-5-90

Date

VII. HEALTH AND SAFETY PLAN APPROVAL/SIGN OFF FORMAT

1. Site Name

881 Hillside

2. WO# 2029-33-09

Work Location Address:

Rocky Flats Plant Galaxy, CO

I have read, understood, and agreed with the information set forth in this Health and Safety Plan (and attachments) and discussed in the Personnel Health and Safety briefing.

Site Safety
Co-ordinator

Signature

Date

Name

Signature

Date

Name

Signature

Date

Name

Signature

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Name

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Signature

Date

VII. HEALTH AND SAFETY PLAN APPROVAL/SIGN OFF FORMAT

1. Site Name

881 Hillside

2. WO# 2029 33-09

Work Location Address:

Rocky Flints Plant Boulder, CO

I have read, understood, and agreed with the information set forth in this Health and Safety Plan (and attachments) and discussed in the Personnel Health and Safety briefing.

Site Safety
Co-ordinator

Signature

Date

Kris Hinds
Name

[Signature]
Signature

2/5/90
Date

MIKE BOYD
Name

[Signature]
Signature

2/7/90
Date

Thomas Barrett
Name

[Signature]
Signature

02-08-90
Date

Timothy H. Meritt
Name

[Signature]
Signature

2-9-90
Date

THOMAS A. LUTHER
Name

Thomas A. Luther
Signature

2-12-90
Date

Kimberly Harris
Name

[Signature]
Signature

2-18-90
Date

[Signature]
Name

[Signature]
Signature

2/27/90
Date

SCOTT A. TULL
Name

[Signature]
Signature

2/22/90
Date

C.A. Halani
Name

C.A. Robinson
Signature

3-20-90
Date

Name

Signature

Date

**Site
Specific
Training**

Meeting Daily

Periodically

Level A

Level B

x

Level C

x

Level D

Monitoring, Sec. 7.0; 29 CFR 1910.120 h.

x

Decontamination, Sec. 9.0; 29 CFR 1910.120 k.

x

Emergency Response, Sec. 10.0; 29 CFR 1910.120 l.

Elements of an Emergency Response, Sec. 100; 29 CFR 1910.120 l.

x

Procedures for Handling Site Emergency Incidents, Sec. 10.0; 29 CFR 1910.120 l.

x

Off-site emergency response, 29 CFR 1910.120 l.

Handling drums and containers, 29 CFR 1910.120 j.

Opening Drums and Containers

Electrical Material Handling Equipment.

x

Radioactive Waste

Shock sensitive waste

Laboratory waste packs.

Sampling drums and containers

Shipping and transport, 49 CFR 172.101

Tank and vault procedures

Illumination, 29 CFR 1910.120 m.

Sanitation, 29 CFR 1910.120 n.

VIII. Training and Briefing Topics

The following items will be covered at the site specific training meeting, daily or periodically.

Site Specific Training Meeting

Daily

Periodically

X

Site characterization and analysis, Sec. 3.0, 29 CFR 1910.120 i.

X

Physical hazards, Table 3.2.

Chemical hazards, Table 3.1.

Animal bites, stings and poisonous plants.

Etiologic (Infectious) agents.

Site contro, Sec. 8.0; 29 CFR 1910.120 d.

X

Engineering controls and work practices, Sec. 8.5; 29 CFR 1910.120 g.

X

Heavy machinery.

Forklift

Backhoe

Equipment

X

Tools

Ladder 29 CFR 1910.27 d.

Overhead and underground utilities

Scaffolds

Structural Integrity

Unguarded openings - wall, floor, ceilings (?).

Pressurized Air Cylinders

X

Personnel protective equipment, Sec. 5.0; 29 CFR 1910.120 g; 29 CFR 1910.134.

X

Respiratory Protection Sec. 5.8; 29 CFR 1910.120 g; Z88.2-1980.

Attachment 1. Level D/Modified Level D Decontamination
[Check indicated Functions or add steps as necessary]

STEP	FUNCTION	DESCRIPTION OF PROCESS, SOLUTION AND CONTAINER
(1)	Segregated equipment drop	
()	Boot cover and glove wash	
()	Boot cover and glove rinse	
(2)	Tape removal - outer glove and boot	
(3)	Boot cover removal	
(4)	Outer glove removal	

-----HOT-LINE-----

()	Suit/safety boot wash
()	Suit/boot/glove rinse
()	Safety boot removal
(5)	Suit Removal
()	Inner glove wash
()	Inner glove rinse
()	Inner glove removal
()	Inner clothing removal

-----CRC/SAFE ZONE BOUNDARY-----

(-)	Field wash
()	Redress

DISPOSAL PLAN: *PPE will be bagged and brought to Weston trailer*
END OF DAY: *For - storage until screened and landfilled.*

END OF WEEK: *Discarded PPE will be screened prior
to disposal at Rocky Flats disposal site.*

END OF PROJECT:

Attachment 2. LEVEL C DECONTAMINATION

[Check indicated Functions or add steps as necessary]

STEP	FUNCTION	DESCRIPTION OF PROCESS, SOLUTION AND CONTAINER
(1)	Segregated equipment drop	
(2)	Boot cover and glove wash	
(3)	Boot cover and glove rinse	
(4)	Tape removal - outer glove/boot	
(5)	Boot cover removal	
(6)	Outer glove removal	

-----HOT-LINE-----

- () Suit/safety boot wash
- () Suit/boot/glove rinse
- () Safety boot removal
- (7) Suit Removal
- () Inner glove wash
- () Inner glove rinse
- (8) Face piece removal
- (9) Inner glove removal
- () Inner clothing removal

-----CRC/SAFE ZONE BOUNDARY-----

- () Field wash
- () Redress

DISPOSAL PLAN: *Same as modified Level 1*
END OF DAY:

END OF WEEK:

END OF PROJECT:

PHASE III RI/FS WORK PLAN

ROCKY FLATS PLANT

88-1 HILLSIDE AREA

OPERABLE UNIT NO. 1

U.S. DEPARTMENT OF ENERGY
Rocky Flats Office
Golden, Colorado

ATTACHMENT 1

JANUARY, 1990

Volume I - Text

(*Chrysemys picta*) and the western plains garter snake (*Thamnophis radix*) are found in and around many of the ponds (U.S. DOE, 1980).

1.4 881 HILLSIDE SITE LOCATIONS AND DESCRIPTIONS

This RI/FS Work Plan addresses the 881 Hillside Area located on the south side of the Rocky Flats Plant security area. These sites were designated high priority sites because of their suspected relationship to ground-water contamination (U.S. DOE, 1987a). Several sites are included in the area because of their physical proximity to each other. Figure 1-5 shows the location of the 881 Hillside Area and presents the site locations within the area.

Twelve sites are located within the 881 Hillside Area. These sites are:

- Oil Sludge Pit Site (SWMU Ref. No. 102);
- Chemical Burial Site (SWMU Ref. No. 103);
- Liquid Dumping Site (SWMU Ref. No. 104);
- Out-of-service Fuel Oil Tank Sites (SWMU Ref. Nos. 105.1 and 105.2);
- Outfall Site (SWMU Ref. No. 106);
- Hillside Oil Leak Site (SWMU Ref. No. 107);
- Multiple Solvent Spill Sites (SWMU Ref. Nos. 119.1 and 119.2);
- Radioactive Site - 800 Area Site #1 (SWMU Ref. No. 130);
- Sanitary Waste Line Leak Site (SWMU Ref. No. 145); and
- Building 885 Drum Storage Site (SWMU Ref. No. 177).

The site descriptions presented in the following sections are taken from the Rocky Flats Plant CEARP Phase I Report (U.S. DOE, 1986), the RCRA Part B Operating Permit Application (Rockwell International, 1987c), and the Phase II Remedial Investigation Report for High Priority Sites (Rockwell International, 1988a). The following descriptions are also based on a more recent review of historical aerial photography.

1.4.1 Oil Sludge Pit Site (SWMU Ref. No. 102)

Approximately 30 to 50 drums of oil sludge were emptied into a pit south of Building 881 in the late 1950s, and the pit was later covered (Rockwell International, 1987c). The sludge was reportedly collected during cleaning of the two No. 6 fuel oil tanks south of Building 881 (SWMU Ref. Nos. 105.1 and 105.2) in 1958 based on interviews with Plant personnel (Rockwell International, 1987c). However, the pit appears to have been in existence in 1955 based on aerial photography of the area. In the 1955 photos, the oil sludge pit is located approximately 500 feet south of Building 881 and measures approximately 40 feet by 70 feet in dimension. The pit appears to contain oily liquids and seepage from the pit is evident. Also apparent on the 1955 photo is a small pond adjacent to Woman Creek (labeled former retention pond on Figure 1-5). Drainage from the Oil Sludge Pit Site appears directed toward this pond. The oil sludge pit was covered after its use (Rockwell International, 1987c), and it is no longer visible on 1963 aerial photographs.

1.4.2 Chemical Burial Site (SWMU Ref. No. 103)

An area south of Building 881 was reportedly used to bury unknown chemicals (U. S. DOE, 1986). The exact location, dates of use, and contents of the site are unknown. This site was originally thought to be located in the same area as the Oil Sludge Pit Site (Rockwell International, 1987c). However, a pit apparently filled with liquid is evident approximately 150 feet southeast of Building 881 on 1963 aerial photographs. This pit is roughly circular on the photos and measures approximately 50 feet in diameter.

1.4.3 Liquid Dumping Site (SWMU Ref. No. 104)

An area east of Building 881 was reportedly used for disposal of unknown liquids and for disposing of empty drums prior to 1969 (U. S. DOE, 1986). A pit was reported with plan dimensions of approximately 50 by 50 feet based on 1965 aerial photographs (Rockwell International, 1987c). However, further review of these historical aerial photos indicates the

identified "pit" may be a shadow on the photo. The Liquid Dumping Pit Site is likely the same location as the Chemical Burial Site; however, the area originally identified as the Liquid Dumping Pit will also undergo additional investigation to verify its absence.

1.4.4 Out-of Service Fuel Tank Sites (SWMU Ref. Nos. 105.1 and 105.2)

Two out-of-service No. 6 fuel oil tanks are located immediately south of Building 881. Asbestos was placed in the two tanks and they were later filled with concrete (U. S. DOE, 1986). The exact dates of these activities are unknown; however, they apparently occurred subsequent to use of the fuel oil storage tanks (1958 through 1976) (Rockwell International, 1987c).

1.4.5 Outfall Site (SWMU Ref. No. 106)

A six-inch diameter vitrified clay pipe outfall existed south of Building 881 which discharged water in December 1977. Previous reports indicated that this was a cleanout pipe for an overflow line from the Building 881 cooling tower (Rockwell International, 1987c). However, review of construction drawings during the Phase II RI indicated that the pipe is an overflow line from the sanitary sewer sump in Building 887.

1.4.6 Hillside Oil Leak Site (SWMU Ref. No. 107)

In May 1973, an oil leak was discovered on the hillside south of Building 881. The source of the oil was believed to be the two No. 6 fuel oil tanks (SWMUs 105.1 and 105.2) south of the building; however, pressure testing of the tanks and associated lines did not reveal any leaks (Rockwell International, 1987c). The oil spill was contained with straw, and the straw and soil were removed and disposed of in the present landfill north of the Plant (Rockwell International, 1987c).

It was later discovered that the oil had emerged through the Building 881 footing drain outfall. A ditch and concrete skimming pond were built below the footing drain outfall to contain the oil (Owen and Steward, 1973). These structures are still present, although no oil has been observed in the outfall since 1973 (Rockwell International, 1987c).

1.4.7 Multiple Solvent Spill Site (SWMU Ref. Nos. 119.1 and 119.2)

Beginning in 1967, two areas east of Building 881 and along the southern perimeter road were used as barrel storage areas. The barrels contained unknown quantities and types of solvents and wastes. The two facilities were expanded between 1967 and 1971, with major expansion occurring in 1969. Barrel storage in these areas was discontinued, and all barrels were removed by 1972. The exact types and quantities of solvents stored at this facility are unknown (Rockwell International, 1987c). SWMU 119.1 is the larger western barrel storage area, and SWMU 119.2 is the eastern barrel storage area. The site boundaries shown on Figure 1-5 represent the extent of soil disturbance associated with the sites. Actual barrel storage areas within each site are also shown.

1.4.8 Radioactive Site - 800 Area #1 (SWMU Ref. No. 130)

An area east of Building 881 and northwest of SWMU 119.1 was used between 1969 and 1972 to dispose of soil and asphalt contaminated with low levels of plutonium. The materials at this site were derived from three sources on Plant site.

In September 1969 approximately 320 tons [250 cubic yards (Illsley, 1978)] of plutonium contaminated soil and asphalt were removed from the west side of Building 776 and placed on the 881 Hillside (Owen and Steward, 1973). The soil and asphalt were contaminated during the May 11, 1969, fire in building 776, and had an estimated average plutonium activity of 7.4 disintegrations per minute per gram (dpm/g). The total plutonium concentration of this material was estimated to be 14 milligrams (mg) (Putzier, 1970). Material from the 1969 fire was buried under one to two feet of fill dirt (Owen and Steward, 1973).

In August 1970, a section of the Central Avenue roadway between Eighth and Tenth Streets was removed and placed on the 881 Hillside at SWMU 130 (Owen and Steward, 1973). This stretch of road was radioactively contaminated in June 1968 by a leaking drum in transit from the 903 Drum Storage Site to Building 774 (Owen and Steward, 1973). The exact quantity and radioactivity of the material removed from Central Avenue are unknown.

The third episode of soil disposal at SWMU 130 occurred in 1972 (Owen and Steward, 1973). Approximately 60 cubic yards of plutonium contaminated soil were removed from around the Building 774 process waste tanks and placed on the 881 Hillside (Owen and Steward, 1973). The soil was deposited on top of previously deposited soils at SWMU 130 and covered with approximately three feet of fill dirt (Illsley, 1978). The estimated total long lived alpha activity of this soil is less than 250 dpm/g (Illsley, 1978).

1.4.9 Sanitary Waste Line Leak Site (SWMU Ref. No. 145)

The four-inch cement-asbestos sanitary sewer line located south of Building 881 leaked in January 1981. An earthen dike was constructed to prevent the spill from entering the South Interceptor Ditch, and the line was repaired. The line conveyed sanitary wastes to the sanitary treatment plant and did not carry hazardous or radioactive materials. Conveyance of laundry wastewater, which may have contained low levels of radioactive materials, was discontinued in 1973 (Rockwell International, 1987c). Review of Building 881 construction drawings indicates that the only sanitary waste lines presently located south of the building are the six-inch overflow line from Building 887 (SWMU 106) and an eight-inch vitrified clay pipe which runs east-west into Building 887.

1.4.10 Building 885 Drum Storage Site (SWMU Ref. No. 177)

Building 885, immediately south of Building 881, is currently used for satellite collection and 90-day accumulation of RCRA regulated wastes. The building will be closed under RCRA Interim Status (40 CFR 265). Complete information on this solid waste

TABLE 2-1 (cont.)

BACKGROUND GROUND-WATER (ROUND 1)
TOLERANCE INTERVAL UPPER LIMITS
OR MAXIMUM DETECTED VALUE

Analyte	Units	Rocky Flats Alluvium (11 Samples)	Colluvium (2 Samples)	Valley Fill Alluvium (8 Samples)	Weathered Claystone (4 Samples)	Weathered Sandstone (2 Samples)	Unweathered Sandstone (7 Samples)
Solids							
Total Dissolved Solids	mg/l	352	520*	947	320*	170*	1761
Carbonate	mg/l	ND	ND	ND	ND	ND	49
Bicarbonate	mg/l	436	470*	719	400*	140*	412
Chloride	mg/l	15.6	20*	40.29	11*	15*	407
Sulfate	mg/l	45.1	86*	150	44*	16*	950
Nitrate	mg/l	2.98	0.18*	0.69*	0.59*	1.6*	0.610
Cyanide	mg/l	.0038*	ND	ND	0.0036*	ND	ND
pH	----	8.6 (5.98)	7.4* (7.1)**	8.68 (6.12)	8.2* (7.6)**	7.5* (7.2)**	10.57 (7.43)
Dissolved Radionuclides							
Gross Alpha	pCi/l	12.543	27*	13.515	12*	7*	13*
Gross Beta	pCi/l	14.578	12*	18.530	7*	2*	15*
Uranium 233, 234	pCi/l	1.647	11*	6.481	5.8*	1.1*	12.956
Uranium 235	pCi/l	0.000	0.3*	0.232	0.2*	0*	0.135
Uranium 238	pCi/l	0.195	7.7*	5.084	3.2	0.6*	3.3507
Strontium 89, 90	pCi/l	0.352	0.1*	0.878	0.1	-0.1*	0.2*
Plutonium 239, 240	pCi/l	0.009	0*	0.012	0.03	0.01*	0.000
Americium 241	pCi/l	0.000	0*	0.012	0	0.01*	0.019
Cesium 137	pCi/l	0.603	0.2*	0.776	0.4	0.3*	0.7*
Tritium	pCi/l	309	100*	505	100	100*	731

* Maximum Detected Value
** Minimum Detected Value
ND Not Detected at Contract Required Detection Limit
() Tolerance Interval Lower Limit for Two-Sided Parameter

TABLE 2-2 (cont.)

BACKGROUND SURFACE WATER (ROUNDS 1 and 2)
TOLERANCE INTERVAL UPPER LIMITS
OR MAXIMUM DETECTED VALUE

Analyte	Units	Round 1 (9 samples)		Round 2 (7 samples)	
		Total	Dissolved	Total	Dissolved
Other					
Total Dissolved Solids	mg/l	329.52	NA	345.15	NA
Carbonate	mg/l	ND	NA	ND	NA
Bicarbonate	mg/l	369.72	NA	344.21	NA
Chloride	mg/l	89.11	NA	82.56	NA
Sulfate	mg/l	50.20	NA	65.30	NA
Nitrate	mg/l	2.45	NA	2.1*	NA
Cyanide	mg/l	ND	NA	0.0043*	NA
pH	----	9.02 (5.89)	NA	8.3 (6.44)	NA
Radionuclides					
Gross Alpha	pCi/l	266	5.805	106	NA
Gross Beta	pCi/l	213	9.335	79	NA
Uranium 233, 234	pCi/l	1.250	3.684	1.326	NA
Uranium 235	pCi/l	0.106	0.364	0.000	NA
Uranium 238	pCi/l	0.937	2.311	0.977	NA
Strontium 89, 90	pCi/l	2.160	1.452	1.243	NA
Plutonium 239, 240	pCi/l	1.066	0.017	0.112	NA
Americium 241	pCi/l	0.111	0.014	0.014	NA
Cesium 137	pCi/l	12.708	0.591	1.059	NA
Tritium	pCi/l	266	NA	863	NA

NA - Not Analyzed
ND - Not Detected
* - Maximum Detected Value
() - Tolerance Interval Lower Limit for Two-Sided Parameter

TABLE 2-3 (cont.)

BACKGROUND SEDIMENT
TOLERANCE INTERVAL UPPER LIMITS
OR MAXIMUM DETECTED VALUE

Analyte	Units	Upper Limit (9 Samples)
Other		
Nitrate	mg/l	ND
pH	----	9.03 (8.77)
Total Radionuclides		
Gross Alpha	pCi/l	60
Gross Beta	pCi/l	50
Uranium 233, 234	pCi/l	1.669
Uranium 235	pCi/l	0.176
Uranium 238	pCi/l	1.755
Strontium 89, 90	pCi/l	1.398
Plutonium 239, 240	pCi/l	0.096
Americium 241	pCi/l	0.029
Cesium 137	pCi/l	1.578
Tritium	pCi/l	0.408

ND - Not Detected
 * - Maximum Detected Value
 () - Tolerance Interval Lower Limit for Two-Sided Parameter

TABLE 2-4 (cont.)

BACKGROUND GEOLOGIC MATERIALS
TOLERANCE INTERVAL UPPER LIMITS
OR MAXIMUM DETECTED VALUE

Analyte	Units	Rocky Flats Alluvium (70 Samples)	Colluvium (28 Samples)	Weathered Claystone (17 Samples)	Weathered Sandstone (4 Samples)
Other					
Sulfide	mg/l	13 ^a	5 ^a	5 ^a	2 ^a
Nitrate	mg/l	4.3 ^a	4.274	2.0 ^a	1.9 ^a
pH	----	9.66 (6.06)	9.48 (6.96)	10.16 (7.06)	9.2 ^a (8.0) ^{aa}
Total Radionuclides					
Gross Alpha	pCi/l	37.108	51.710	52.302	37
Gross Beta	pCi/l	36.886	35.135	35.743	29
Uranium 235, 234	pCi/l	1.491	1.759	1.905	0.8
Uranium 235	pCi/l	0.087	0.169	0.258	0.1
Uranium 238	pCi/l	1.353	1.675	1.643	1.0
Strontium 90, 90	pCi/l	0.768	0.776	0.766	0.4
Plutonium 239, 240	pCi/l	0.017	0.023	0.020	0.01
Americium 241	pCi/l	0.018	MR	MR	MR
Cesium 137	pCi/l	0.082	0.113	ND	0.0
Tritium	pCi/l	0.410	0.299	0.322	0.39

ND - Not Detected
MR - Data Not Received
a - Maximum Detected Value
aa - Minimum Detected Value
() - Tolerance Interval Lower Limit for Two-Sided Parameter

Volatile chlorinated hydrocarbon contamination is apparently not extensive. It occurred in soils from only 3 of the 23 boreholes [(BH01-87 (SWMUs 107 and 177), BH57-87 (SWMU 119.1), and BH58-87 (SWMU 119.2)]. The highest concentrations detected were tetrachloroethene (PCE) at 190 micrograms per kilogram ($\mu\text{g}/\text{kg}$) in BH01-87, trichloroethene (TCE) at 150 $\mu\text{g}/\text{kg}$ in BH57-87, and 1,1,1-trichloroethane (1,1,1-TCA) at 110 $\mu\text{g}/\text{kg}$ in BH57-87.

Boreholes will be drilled and samples collected from all SWMUs for organic analysis during the Phase III RI. The single most important reason for this activity is that previous volatile organic data have been rejected. The collection of these additional data is necessary to determine whether methylene chloride, acetone, and phthalates are soil contaminants. However, additional soil sampling is also needed to verify SWMU locations; to assess the vertical and horizontal distribution of organic contamination; and to identify maximum concentrations of contaminants in suspected "hot spots".

2.3.2.2 Metals

In general, metal concentrations in soil samples from Rocky Flats Alluvium, colluvium and claystone were within background levels. Trace metals which occurred above background in these three materials include: antimony (3.4%), arsenic (30.3%), mercury (5.6%), cadmium (60.7%), manganese (1.1%), and barium (6.7%). Parenthesis indicate percent of the samples exceeding the background range. These metal concentrations occurred randomly throughout the 881 Hillside soils, and did not exceed a factor of two of the upper limit of the background tolerance interval or range. The upper limit of background for cadmium is based on a maximum detected value rather than a tolerance interval. Thus, the cadmium concentrations in 881 Hillside colluvium and claystone may actually be statistically insignificant relative to background.

2.3.2.3 Radionuclides

Radionuclide concentrations have been compared to the upper limit of the background tolerance interval or background range as appropriate. However, this comparison requires consideration of the following information regarding error terms.

Radionuclides are analyzed by counting sub-atomic particle emissions, which is a random function. Since radioactive disintegration is a statistical process and therefore has a probability distribution, results are reported as a measured value with an associated two standard deviation propagated error term following the measured value. Radionuclide concentrations where the error term is larger than the measured value can be considered not statistically different from background because of the significant overlap of the probability distributions. On the other hand, if the measured value minus the error term for a sample is greater than the measured value plus the error term for the upper limit of the background range, it can be considered statistically different from background.

Table 2-7 presents the percent of samples for each radionuclide detected above background at the surface and in the subsurface. Plutonium and americium were only detected above background in surface soils (maximum concentrations were 0.91 ± 0.38 picoCuries per gram (pCi/g) and 0.15 ± 0.13 pCi/g, respectively). The origin of this contamination is likely the 903 Pad Area resulting from wind dissemination of plutonium/americium contaminated dust. Because surface samples are 12 to 24 inch composites, actual near surface concentrations are much higher. More recently collected data for plutonium, uranium 238, and uranium 233 + 234 concentrations in surface scrape samples are presented in Table 2-8 (U. S. DOE, 1989). Sample locations are shown in Figure 2-7. It can be seen that plutonium concentrations were as high as 4.8 pCi/g in surface soils at the 881 Hillside Area. These concentrations are typical of surface plutonium concentrations in this vicinity and to the east within the Plant boundary based on sampling performed by Rockwell International's Health, Safety and Environment Department (Rockwell International, 1987b). High uranium

TABLE 2-7**PERCENT OF SOIL SAMPLES WITH RADIONUCLIDES ABOVE BACKGROUND**

<u>Radionuclide</u>	<u>Percent of Surface Samples Above Background</u>	<u>Percent of Subsurface Samples Above Background</u>
Uranium (Total)	6	6
Plutonium 239 + 240	11	0
Americium 241	6	0
Cesium 137	17	7
Tritium	6	3

TABLE 2-8

881 HILLSIDE 1988 SURFACE SCRAPE SAMPLING RESULTS

RADIONUCLIDE CONCENTRATION IN pCi/g

Sample No.	Uranium 233 + 234	Uranium 238	Plutonium
881-1	0.56±0.26	0.6±0.15	4.3±0.5
881-2	0.78±0.26	0.86±0.15	2.4±0.2
881-3	0.82±0.26	0.91±0.15	4.8±0.5
881-4	1.0±0.3	0.97±0.2	0.18±0.006
881-5	0.86±0.26	0.88±0.15	0.59±0.008
881-6	1.5±0.3	5.5±0.5	2.2±0.2
881-7	0.74±0.26	0.75±0.15	0.63±0.09
881-8	0.86±0.26	0.82±0.15	1.8±0.2
881-9	3.1±0.3	1.0±0.2	0.47±0.006
881-10	1.1±0.3	0.98±0.2	3.5±0.4
881-11	1.0±0.3	1.3±0.2	2.6±0.3
881-12	0.93±0.26	1.4±0.2	0.4±0.06
881-13	0.94±0.26	1.3±0.2	0.16±0.06
881-14	1.1±0.3	1.0±0.2	3.0±0.4
881-15	2.0±0.3	1.5±0.16	0.01±0.06
881-16	50±190	1300±100	0.3±0.06
881-17	19±74	590±70	0.78±0.19
881-18	60±230	3000±300	0.42±0.08
881-19	10±740	550±60	0.09±0.06

SSP,
not on map

Data from: U. S. DOE, 1989

concentrations occurred in samples 16 through 19. Depleted uranium which is used at the Rocky Flat Plant has a uranium 233 + 234 to uranium 238 activity ratio of 0.38, whereas natural uranium has a ratio of 1.11. The uranium isotope ratios for these surface soils indicate the uranium is depleted (low ratio). The contamination presumably resulted from drums that had leaked in the past, or from past spills. They were initially discovered during a FIDLER survey of the area during the Phase II RI. Each contaminated area is small (less than ten square feet in area).

Referring again to Table 2-7, uranium, cesium, and tritium occur infrequently above background and occur at depth (Appendix A). None of these radionuclides were present above background by more than a factor of two above the upper tolerance interval. The uranium 233 + 234 to uranium 238 activity ratios are greater than one indicating the uranium is natural. Because there has never been a criticality at Rocky Flats Plant, the cesium 137 is presumed to be due to fallout (Rockwell International, _____). This suggests that these radionuclide concentrations may represent natural variations outside the background tolerance intervals.

2.3.3 Ground Water

Ground water at the 881 Hillside occurs in alluvium, colluvium, valley fill alluvium, and weathered and unweathered bedrock. The discussion of ground-water quality is subdivided by SWMU groupings. Ground water at or downgradient of SWMUs 102, 103, 105, 106, 107 and 145 is discussed first. These SWMUs are in close proximity to each other. A discussion of ground water at or downgradient of SWMUs 119.1, 119.2 and 130 follows.

Within each SWMU grouping, the discussion of chemistry has been subdivided into ground water in surficial material (Rocky Flats Alluvium, colluvium and valley fill alluvium) and weathered bedrock (unconfined flow system), and ground water in unweathered bedrock

69-89, these wells were either dry or contained insufficient water for chemical analysis during first quarter 1988. Although wells 1-87 and 68-86 are upgradient of these SWMUs, ground-water quality in these wells is occasionally above background with respect to certain major ions, trace metals and organics as discussed below. Ground-water quality in these wells may be affected by Plant activities upgradient of 881 Hillside, and additional wells will be installed upgradient of the 881 Hillside Area.

Of the wells downgradient from these SWMUs, organics were not detected during the second quarter 1989; however, it is noted that wells 52-87 and 2-87 had detectable volatile organics during first quarter 1989. PCE was estimated below detection limits in both wells at concentrations of 2J micrograms per liter ($\mu\text{g/l}$) and 35J $\mu\text{g/l}$, respectively. TCE was also estimated below detection limits in well 2-87 at a concentration of 2J $\mu\text{g/l}$. With the exception of well 69-86, the remaining wells were dry during first quarter and second quarter 1989.

Ground-water quality data from wells 52-87, 69-86, and 2-87 indicate inorganic contamination exists. Total dissolved solids (TDS) and major ion (calcium magnesium, sodium, chloride, sulfate, and bicarbonate) concentrations were higher than background during the first quarter 1988. Wells 69-86 and 2-87 also had nitrate levels present above background. Wells 2-87 and 52-87 contained elevated manganese; wells 2-87 and 69-86 contained elevated zinc; and wells 52-87 and 69-86 contained elevated strontium. Selenium was also above background in well 69-86. Gross alpha, gross beta, uranium 233 + 234, uranium 235, and uranium 238 were above background in wells 1-87 and 52-87, and uranium 235 and 238 were above background in well 69-86. Total uranium concentrations in these wells were in the range of 8 to 15 picoCuries per liter (pCi/l). Although metals and other inorganics data do not exist for well 1-87, the elevated uranium in this "upgradient" well suggests the general inorganics contamination and low level organic contamination in this area may not be from these SWMUs. There are no wells directly downgradient of these SWMUs in the valley fill alluvium. Just upgradient of the 881 Hillside in the valley fill alluvium, wells 58-86 and 68-86 were dry.

TABLE 2-11
CHEMICAL SPECIFIC ARARs
FOR COMPOUNDS AND ELEMENTS DETECTED
AT THE 881 HILLSIDE AREA

Chemical	Maximum in 881 Hillside Area Alluvial Ground Water ^a	ARAR (ug/l)	Detection Limit (ug/l)	Standard Criteria or Guidance	Comment
<u>Organic Compounds</u>					
Acetone	19	50	10	RCRA LDR is relevant and appropriate (R2A)	ARAR is not exceeded
Carbon Tetrachloride	2400J	5	5	CDM Surface Water; Drinking Water Standard is applicable	ARAR is exceeded
1,1 Dichloroethane	180J	50	5	RCRA Subpart F, Appendix IX Substance is TSC	TSC is exceeded
1,2 Dichloroethane	17J	5	5	CDM Surface Water; Drinking Water Standard is applicable	ARAR is exceeded
1,1 Dichloroethene	7900J	7	5	CDM Surface Water; Drinking Water Standard is applicable	ARAR is exceeded
Methylene Chloride	178	50	5	RCRA Subpart F is R2A	ARAR is exceeded
Tetrachloroethene	5900J	10	5*	CDM Surface Water; Fish and Water Ingestion Standard is applicable	ARAR is exceeded
Toluene	5J	2420	5	CDM Surface Water; Drinking Water Standard is applicable	ARAR is not exceeded
1,1,1 Trichloroethane	15,000	200	5	CDM Surface Water; Drinking Water Standard is applicable	ARAR is not exceeded
1,1,2 Trichloroethane	47J	10	5*	CDM Surface Water; Fish and Water Ingestion Standard is applicable	ARAR is exceeded
Trichloroethene	11,000	5	5	CDM Surface Water; Drinking Water Standard is applicable	ARAR is exceeded
Carbon Disulfide	3J	50	5	CDM Surface Water; Drinking Water Standard is applicable	ARAR is not exceeded

TABLE 2-11 (cont'd)
CHEMICAL SPECIFIC ARARs
FOR COMPOUNDS AND ELEMENTS DETECTED
AT THE 801 HILLSIDE AREA

Chemical	Maximum in 801 Hillside Area Alluvial Ground Water ^a	ARAR (ug/l)	Detection Limit (pci/l)	Standard Criteria or Guidance	Comment
Radionuclides					
Gross Alpha	319	7	2	CDM Surface Water Standard is applicable	ARAR is exceeded
Gross Beta	266	5	4	CDM Surface Water Standard applicable	ARAR is exceeded
P ₂₃₈ , P ₂₃₉ , P ₂₄₀	<0.01 ^c	0.05	0.01	CDM Surface Water Standard is applicable	ARAR is not exceeded
Am ²⁴¹	<0.01 ^c	0.05	0.01	CDM Surface Water Standard is applicable	ARAR is not exceeded
N ³	777	500	400	CDM Surface Water Standard is applicable	ARAR is exceeded
Sn ^{99,90}	5.6	8	1	CDM Surface Water Standard is applicable	ARAR is not exceeded
Uranium total	58.9	5	1.8	CDM Surface Water Standard is applicable	ARAR is exceeded

(a) - Maximum compound concentrations determined from first and second quarter 1989 data.
(b) - Maximum compound concentrations determined from 1987 and 1988 database.
(c) - Detection limit

(d) - Estimated below detection limit
(e) - Compound also present in blank
(f) - To be considered
(g) - Below minimum detectable activity (MDA)
(h) - Detection limit exceeds ARARs

Attachment 2

CARBON TETRACHLORIDE

Summary

Carbon tetrachloride is used as a industrial solvent and chemical intermediate. It is an animal carcinogen, causing liver tumors in mice, rats and hamsters. Carbon tetrachloride also causes liver and kidney damage in animals and humans.

Chemical Formula CCl_4

IUPAC Name Tetrachloromethane

Important Synonyms and Trade Names Tetrachloromethane perchloromethane

Chemical and Physical Properties

Molecular Weight 153.8

Boiling Point 76.7°C

Melting Point 22.9°C

Specific Gravity 1.59 at 20°C (liquid)
5.3 vapor (gas) specific gravity

Solubility in Water: 800 mg/liter

Solubility in Organics: Miscible with alcohol, benzene, chloroform, ether and carbon disulfide

Log Octanol/Water Partition Coefficient 2.64

Vapor Pressure 90 mm Hg at 20°C

Vapor Density 5.32

Transport and Fate

Carbon tetrachloride has a high vapor pressure and therefore volatilizes rapidly into the atmosphere from surface water and probably from soil. It is relatively soluble in water and therefore would be expected to be transported in groundwater. Because of its high specific gravity, it may move independently from the groundwater as a nonaqueous phase liquid.

Health Effects

Carbon tetrachloride was carcinogenic in mice rats and hamsters in all cases liver tumors were induced. In addition, mice also displayed a high incidence of tumors of the adrenal gland. Studies discussed by EPA (1980) on the mutagenic and teratogenic effects of carbon tetrachloride and its impact on reproduction are inconclusive. Carbon tetrachloride also causes both liver and kidney damage in animals and humans. One study in which guinea pigs were repeatedly exposed to carbon tetrachloride vapor for several months provided evidence of damage to the optic nerve and degeneration of the myelin sheath of the sciatic nerve.

Regulations and Standards

Ambient Water Quality Criteria (U.S. EPA)

Aquatic Life

The available data are not adequate for establishing criteria. However, EPA did report the lowest values known to cause toxicity in aquatic organisms.

Freshwater

Acute toxicity 35 200 ug/liter
Chronic toxicity No available data

Saltwater

Acute toxicity 50,000 ug/liter
Chronic toxicity No available data

Human Health

Estimates of the carcinogenic risks associated with lifetime exposure to carbon tetrachloride at various concentrations in water are:

<u>Risk</u>	<u>Concentration</u>
10^{-5}	40 ug/liter
10^{-6}	0.4 ug/liter
10^{-7}	0.04 ug/liter

CAG Unit Risk (U.S. EPA): $1.3 \times 10^{-1} \text{ (mg/kg/day)}^{-1}$

OSHA Standard (air): 10 ppm TWA
25 ppm Ceiling Level

ACGIH Threshold Limit Value: 5 ppm Skin.

1,1-DICHLOROETHANE

Summary

1,1-Dichloroethane is quite volatile and probably is not very persistent in aquatic environments. Inhalation exposure to high doses causes central nervous system depression in humans and may cause hepatotoxicity. In animals, high doses cause liver and kidney damage and retard fetal development.

CAS Number 75-34-3

Chemical Formula CH_3CHCl_2

IUPAC Name 1,1-Dichloroethane

Important Synonyms and Trade names Ethylidene chloride ethylidene dichloride

Chemical and Physical Properties

Molecular Weight 98.96

Boiling Point 57.3°C

Melting Point -97.0°C

Specific Gravity 1.1776 at 20°C

Solubility in Water: 5 g/liter

Solubility in Organics: Miscible in alcohol

Log Octanol/Water Partition Coefficient: 1.79

Vapor Pressure: 180 mm Hg at 20°C

Transport and Fate

1,1-Dichloroethane disperses from surface water primarily by volatilization into the troposphere, where it is subsequently broken down by hydroxylation. No studies on adsorption were found in the literature reviewed, but because of its water solubility and relatively low log octanol/water partition coefficient, 1,1-dichloroethane potentially could move through soil and enter the groundwater.

Health Effects

Limited toxicological testing of 1,1-dichloroethane has been conducted although the literature indicates that 1,1-dichloroethane is one of the least toxic of the chlorinated ethanes. An NCI bioassay on 1,1-dichloroethane was limited by poor survival of test animals but some marginal tumorigenic effects were seen. Inhalation exposure to high doses of 1,1-dichloroethane (over 16 000 mg/m³) caused retarded fetal development in rats. 1,1-Dichloroethane was not found to be mutagenic using the Ames assay. 1,1-Dichloroethane causes central nervous system depression when inhaled at high concentrations and evidence suggests that the compound is hepatotoxic in humans. Kidney and liver damage was seen in animals exposed to high levels of 1,1-dichloroethane. The oral LD₅₀ value in the rat is 725 mg/kg.

Regulations and Standards

Ambient Water Quality Criteria (U.S. EPA)

The available data were inadequate for establishing criteria.

OSHA Standard (air): 400 mg/m³ TWA

ACGIH Threshold Limit Value: 310 mg/m³ TWA - 200 ppm

1,2-DICHLOROETHANE

Summary

1,2-Dichloroethane (ethylene dichloride) is a volatile organic solvent and volatilization and percolation into groundwater may be significant routes of transport. It has a low solubility in water and may be a component in nonaqueous-phase liquids. 1,2-Dichloroethane is carcinogenic in animals and mutagenic in bacterial test systems. It is a suspected human carcinogen.

CAS Number 107-06-02

Chemical Formula. $\text{CH}_2\text{ClCH}_2\text{Cl}$

IUPAC Name 1,2-Dichloroethane

Important Synonyms and Trade Names Ethylene dichloride, glycol dichloride

Chemical and Physical Properties

Molecular Weight 98.96

Boiling Point 83-84°C

Melting Point -35.4°C

Specific Gravity 1.253 at 20°C

Solubility in Water 8 g/liter

Solubility in Organics: Miscible with alcohol, chloroform, and ether

Log Octanol/Water Partition Coefficient 1.48

Vapor Pressure 61 mm Hg at 20°C

Flash Point 15°C (closed cup)

Transport and Fate

The primary method of dispersion from surface water for 1,2-dichloroethane is volatilization. In the atmosphere 1,2-dichloroethane is rapidly broken down by hydroxylation although some may be absorbed by atmospheric water and return to the earth by precipitation. No studies on the adsorption of 1,2-dichloroethane onto soil were reported in the literature examined. However, 1,2-dichloroethane has a low octanol/water partition coefficient, is slightly soluble in water, and therefore leaching through the soil into the groundwater is an expected route of dispersal.

Health Effects

1,2-Dichloroethane is carcinogenic in rats and mice producing a variety of tumors. When administered by gavage it produced carcinomas of the forestomach and hemangiosarcomas of the circulatory system in male rats; adenocarcinomas of the mammary gland in female rats; lung adenomas in male mice and lung adenomas, mammary adenocarcinomas, and endometrial tumors in female mice. It is mutagenic when tested using bacterial test systems. Human exposure by inhalation to 1,2-dichloroethane has been shown to cause headache, dizziness, nausea, and liver and kidney dysfunction. Dermatitis may be produced by skin contact. In severe cases leukocytosis (an excess of white blood cells) may be diagnosed and internal hemorrhaging and pulmonary edema leading to death may occur. Similar effects are produced in experimental animals.

Regulations and Standards

Ambient Water Quality Criteria (U.S. EPA)

Aquatic Life

The available data are not adequate for establishing criteria. However, EPA did report the lowest values known to be toxic in aquatic organisms:

Freshwater

Acute toxicity 118 mg/liter
Chronic toxicity 20 mg/liter

Saltwater

Acute toxicity 113 mg/liter
Chronic toxicity No available data

Human Health

Estimates of the carcinogenic risks associated with lifetime exposure to various concentrations of 1,2-dichloroethane in water are:

<u>Risk</u>	<u>Concentration</u>
10^{-5}	94 ug/liter
10^{-6}	0.94 ug/liter
10^{-7}	0.094 ug/liter

1 1-DICHLOROETHYLENE

Summary

1 1-Dichloroethylene (VDC vinylidene chloride) caused kidney tumors (in males only) and leukemia in one study of mice exposed by inhalation but the results of other studies were equivocal or negative. 1 1-Dichloroethylene is mutagenic and it caused adverse reproductive effects when administered to rats and rabbits by inhalation. Chronic exposure causes liver damage and acute exposure to high doses produces nervous system damage.

CAS Number 75-35-4

Chemical Formula CH_2Cl_2

IUPAC Name 1 1-Dichloroethene

Important Synonyms and Trade Names Vinylidene chloride VDC 1 1-dichloroethene, 1 1-DCE

Chemical and Physical Properties

Atomic Weight 96.94

Boiling Point 37°C

Melting Point -122.1°C

Specific Gravity 1.218 at 20°C

Solubility in Water 400 mg/liter at 20°C

Solubility in Organics: Sparingly soluble in alcohol, ether, acetone, benzene, and chloroform

Log Octanol/Water Partition Coefficient 1.48

Vapor Pressure 500 mm Hg at 20°C

Vapor Density 3.25

Transport and Fate

Volatilization appears to be the primary transport process for 1,1-dichloroethylene (VDC), and its subsequent photooxidation in the atmosphere by reaction with hydroxyl radicals is apparently the predominant fate process. Information on other transport and fate mechanisms was generally lacking for 1,1-dichloroethylene. However, by inference from related compounds, hydrolysis, sorption, bioaccumulation, biotransformation, and biodegradation probably all occur but at rates too slow to be of much significance.

Health Effects

1,1-Dichloroethylene caused kidney tumors in males and leukemia in males and females in one study of mice exposed by inhalation. It gave equivocal results in other inhalation studies, and gave negative results in rats and mice following oral exposure and in hamsters following inhalation exposure. VDC was mutagenic in several bacterial assays. 1,1-Dichloroethylene did not appear to be teratogenic but did cause embryotoxicity and fetotoxicity when administered to rats and rabbits by inhalation. Chronic exposure to oral doses of VDC as low as 5 mg/kg/day caused liver changes in rats. Acute exposure to high doses causes central nervous system depression, but neurotoxicity has not been associated with low-level chronic exposure. The oral LD₅₀ value for the rat is 1,500 mg/kg, and for the mouse it is 200 mg/kg.

Regulations and Standards

Ambient Water Quality Criteria (U.S. EPA)

Aquatic Life

The available data are inadequate for establishing criteria. However, EPA did report the lowest values known to cause toxicity in aquatic organisms.

Freshwater

Acute toxicity: 11,600 µg/liter
Chronic toxicity: No available data

Saltwater

Acute toxicity: 224,000 µg/liter
Chronic toxicity: No available data

Human Health

Estimates of the carcinogenic risks associated with lifetime exposure to various concentrations of 1,2-dichloroethane in water are

<u>Risk</u>	<u>Concentration</u>
10^{-5}	0.33 ug/liter
10^{-6}	0.033 ug/liter
10^{-7}	0.0033 ug/liter

CAG Unit Risk (U.S. EPA) $1.16 \text{ (mg/kg/day)}^{-1}$

ACGIH Threshold Limit Value 5 ppm TWA
20 mg/m³ TWA
485 mg/m³ STEL

METHYLENE CHLORIDE

Summary

Methylene chloride increased the incidence of lung and liver tumors and sarcomas in rats and mice. It was found to be mutagenic in bacterial test systems. In humans, methylene chloride irritates the eyes, mucous membranes, and skin. Exposure to high levels adversely affects the central and peripheral nervous systems and the heart. In experimental animals, methylene chloride is reported to cause kidney and liver damage, convulsions, and paresis.

CAS Number: 75-09-2

Chemical Formula: CH_2Cl_2

IUPAC Name: Dichloromethane

Important Synonyms and Trade names: Methylene dichloride, methane dichloride

Chemical and Physical Properties

Molecular Weight: 84.93

Boiling Point: 40°C

Melting Point: -95.1°C

Specific Gravity: 1.3266 at 20°C

Solubility in Water: 13,200-20,000 mg/liter at 25°C

Solubility in Organics: Miscible with alcohol and ether

Log Octanol/Water Partition Coefficient: 1.25

Vapor Pressure: 362.4 mm Hg at 20°C

Vapor Density: 2.93

Transport and Fate

Volatilization to the atmosphere appears to be the major mechanism for removal of methylene chloride from aquatic systems and its primary environmental transport process. Photooxidation in the troposphere appears to be the dominant environmental fate of methylene chloride. Once in the troposphere, the compound is attacked by

hydroxyl radicals, resulting in the formation of carbon dioxide, and to a lesser extent carbon monoxide and phosgene. Phosgene is readily hydrolyzed to HCl and CO₂. About one percent of tropospheric methylene chloride would be expected to reach the stratosphere where it would probably undergo photodissociation resulting from interaction with high energy ultraviolet radiation. Aerial transport of methylene chloride is partly responsible for its relatively wide environmental distribution. Atmospheric methylene chloride may be returned to the earth in precipitation.

Photolysis, oxidation, and hydrolysis do not appear to be significant environmental fate processes for methylene chloride, and there is no evidence to suggest that either adsorption or bioaccumulation are important fate processes for this chemical. Although methylene chloride is potentially biodegradable, especially by acclimatized microorganisms, biodegradation probably only occurs at a very slow rate.

Health Effects

Methylene chloride is currently under review by the National Toxicology Program. Preliminary results indicate that it produced an increased incidence of lung and liver tumors in mice and mammary tumors in female and male rats. In a chronic inhalation study, male rats exhibited an increased incidence of sarcomas in the ventral neck region. However, the authors suggested that the relevance and toxicological significance of this finding were uncertain in light of available toxicity data. Methylene chloride is reported to be mutagenic in bacterial test systems. It also has produced positive results in the Fisher rat embryo cell transformation test. However, it has been suggested that the observed cell-transforming capability may have been due to impurities in the test material. There is no conclusive evidence that methylene chloride can produce teratogenic effects.

In humans, direct contact with methylene chloride produces eye, respiratory passage, and skin irritation. Mild poisoning due to inhalation exposure produces somnolence, lassitude, numbness and tingling of the limbs, anorexia, and lightheadedness, followed by rapid and complete recovery. More severe poisoning generally involves correspondingly greater disturbances of the central and peripheral nervous systems. Methylene chloride also has acute toxic effects on the heart, including the induction of arrhythmia. Fatalities reportedly due to methylene chloride exposure have been attributed to cardiac injury and heart failure. Methylene chloride is metabolized to carbon monoxide in vivo, and levels of carboxyhemoglobin in the blood are elevated after acute exposures. In experimental animals, methylene chloride is reported to cause kidney and liver damage, convulsions, and distal paresis. An oral LD₅₀ value of 2,136 mg/kg, and an inhalation LC₅₀ value of 88,000 mg/m³/30 min are reported for the rat.

Regulations and Standards

Ambient Water Quality Criteria (U.S. EPA):

Aquatic Life

The available data are not adequate for establishing criteria.

Human Health

Criterion. 12.4 mg/liter (for protection against the noncarcinogenic effects of methylene chloride)

CAG Unit Risk (US EPA): 1.4×10^{-2} (mg/kg/day)⁻¹

NIOSH Recommended Standards:

261 mg/m³ TWA in the presence of no more than 99 mg/m³ of CO
1.737 mg/m³/15 min Peak Concentration

OSHA Standard: 1.737 mg/m³ TWA
3.474 mg/m³ Ceiling Level
6.948 mg/m³ Peak Concentration (5 min in any 3 hr)

ACGIH Threshold Limit Value 350 mg/m³ TWA
100 ppm TWA
1740 mg/m³ STEL
500 ppm STEL

TETRACHLOROETHYLENE

Summary

Tetrachloroethylene (PCE, perchloroethylene) induced liver tumors when administered orally to mice and was found to be mutagenic using a microbial assay system. Reproduction toxicity was observed in pregnant rats and mice exposed to high concentrations. Animals exposed by inhalation to tetrachloroethylene exhibited liver kidney, and central nervous system damage.

CAS Number 127-18-4

Chemical Formula. C_2Cl_4

IUPAC Name. Tetrachloroethene

Important Synonyms and Trade Names. Perchloroethylene. PCE

Chemical and Physical Properties

Molecular Weight. 165.83

Boiling Point: 121°C

Melting Point: -22.7°C

Specific Gravity: 1.63

Solubility in Water 150 to 200 mg/liter at 20°C

Solubility in Organics: Soluble in alcohol, ether, and benzene

Log Octanol/Water Partition Coefficient 2.88

Vapor Pressure: 14 mm Hg at 20°C

Transport and Fate

Tetrachloroethylene (PCE) rapidly volatilizes into the atmosphere where it reacts with hydroxyl radicals to produce HCl, CO, CO₂, and carboxylic acid. This is probably the most important transport and fate process for tetrachloroethylene in the environment. PCE will leach into the groundwater, especially in soils of low organic content. In soils with high levels of organics, PCE adsorbs to these materials and can be bioaccumulated to some degree. However, it is unclear if tetrachloroethylene bound to organic material can be degraded by microorganisms or must be desorbed to be destroyed. There is some evidence that higher organisms can metabolize PCE.

Health Effects

Tetrachloroethylene was found to produce liver cancer in male and female mice when administered orally by gavage. Unpublished gavage studies in rats and mice performed by the National Toxicology Program (NTP) showed hepatocellular carcinomas in mice and a slight statistically insignificant increase in a rare type of kidney tumor. NTP is also conducting an inhalation carcinogenicity study. Elevated mutagenic activity was found in Salmonella strains treated with tetrachloroethylene. Delayed ossification of skull bones and sternebrae were reported in offspring of pregnant mice exposed to 2,000 mg/m³ of tetrachloroethylene for 7 hours/day on days 6-15 of gestation. Increased fetal resorptions were observed after exposure of rats to tetrachloroethylene. Renal toxicity and hepatotoxicity have been noted following chronic inhalation exposure of rats to tetrachloroethylene. Renal toxicity and hepatotoxicity have been noted following chronic inhalation exposure of rats to tetrachloroethylene levels of 1,356 mg/m³. During the first 2 weeks of a subchronic inhalation study, exposure to concentrations of 16,222 ppm (10,867 mg/m³) of tetrachloroethylene produced signs of central nervous system depression and cholinergic stimulation was observed among rabbits, monkeys, rats and guinea pigs.

Regulations and Standards

Ambient Water Quality Criteria (U.S. EPA)

Aquatic Life

The available data are not adequate for establishing criteria. However, EPA did report the lowest values known to be toxic in aquatic organisms.

Freshwater

Acute toxicity: 5,280 ug/liter
Chronic toxicity: 840 ug/liter

Saltwater

Acute toxicity: 10,200 ug/liter
Chronic toxicity: 450 ug/liter

Human Health

Estimates of the carcinogenic risks associated with lifetime exposure to various concentrations of tetrachloroethylene in water are:

<u>Risk</u>	<u>Concentration</u>
10 ⁻⁵	8.0 ug/liter
10 ⁻⁶	0.8 ug/liter
10 ⁻⁷	0.08 ug/liter

CAG Unit Risk (US EPA) $5.1 \times 10^{-2} \text{ (mg/kg/day)}^{-1}$

NIOSH Recommended Standards (air):

335 mg/m^3 TWA

670 mg/m^3 15-min Ceiling Level

OSHA Standard (air):

670 mg/m^3 TWA

1,340 mg/m^3 Ceiling Level

2,010 mg/m^3 for 5 min every 3 hr. Peak Concentration

ACGIH Threshold Limit Value:

50 ppm TWA

335 mg/m^3 TWA

200 ppm STEL

1,340 mg/m^3 STEL

TOLUENE

Summary

Toluene has been shown to be embryotoxic in experimental animals, and the incidence of cleft palate increased in the offspring of dosed mice. Chronic inhalation exposure to high levels of toluene caused cerebellar degeneration and an irreversible encephalopathy in animals. In humans, acute exposure depressed the central nervous system and caused narcosis.

CAS Number 108-88-3

Chemical Formula $C_6H_5CH_3$

IUPAC Name: Methylbenzene

Important Synonyms and Trade Names Toluol, phenylmethane

Chemical and Physical Properties

Molecular Weight. 92.13

Boiling Point: 110.6°C

Melting Point. -95°C

Specific Gravity: 0.8669 at 20°C

Solubility in Water 534.8 mg/liter

Solubility in Organics: Soluble in acetone, ligroin, and carbon disulfide, miscible with alcohol, ether, benzene, chloroform, glacial acetic acid, and other organic solvents

Log Octanol/Water Partition Coefficient: 2.69

Vapor Pressure: 28.7 mm Hg at 25°C

Vapor Density 3.14

Flash Point. 44°C

Transport and Fate

Volatilization appears to be the major route of removal of toluene from aquatic environments, and atmospheric reactions of toluene probably subordinate all other fate processes. Photooxidation is the primary atmospheric fate process for toluene and benzaldehyde is reported to be the principal organic product. Subsequent precipitation or dry deposition can deposit toluene and its oxidation products into aquatic and terrestrial systems. Direct photolytic cleavage of toluene is energetically improbable in the troposphere, and oxidation and hydrolysis are probably not important as aquatic fates.

The log octanol/water partition coefficient of toluene indicates that sorption processes may be significant. However, no specific environmental sorption studies are available, and the extent to which adsorption by sedimentary and suspended organic material may interfere with volatilization is unknown. Bioaccumulation is probably not an important environmental fate process. Although toluene is known to be degraded by microorganisms and can be detoxified and excreted by mammals, the available data do not allow estimation of the relative importance of biodegradation/biotransformation processes. Almost all toluene discharged to the environment by industry is in the form of atmospheric emissions.

Health Effects

There is no conclusive evidence that toluene is carcinogenic or mutagenic in animals or humans. The National Toxicological Program is currently conducting an inhalation carcinogenicity bioassay in rats and mice.

Oral administration of toluene at doses as low as 260 mg/kg produced a significant increase in embryonic lethality in mice. Decreased fetal weight was observed at doses as low as 434 mg/kg, and an increased incidence of cleft palate was seen at doses as low as 867 mg/kg. However, other researches have reported that toluene is embryotoxic but not teratogenic in laboratory animals. There are no accounts of a teratogenic effect in humans after exposure to toluene.

Acute exposure to toluene at concentrations of 375-1,500 mg/kg produces central nervous system depression and narcosis in humans. However, even exposure to quantities sufficient to produce unconsciousness fail to produce residual organ damage. The rat oral LD₅₀ value and inhalation LC₅₀ value are 5,000 mg/kg and 15,000 mg/m³, respectively. Chronic inhalation exposure to toluene at relatively high concentrations produces cerebellar degeneration and an irreversible encephalopathy in mammals.

Toluene in sufficient amounts appears to have the potential to alter significantly the metabolism and resulting bioactivity of certain chemicals. For example, coadministration of toluene along with benzene or styrene has been shown to suppress the metabolism of benzene or styrene in rats.

Regulations and Standards

Ambient Water Quality Criteria (US EPA).

Aquatic Life

The available data are not adequate for establishing criteria. However EPA did report the lowest values known to cause toxicity in aquatic organisms

Freshwater

Acute toxicity: 17 500 ug/liter

Chronic toxicity: No available data

Saltwater

Acute toxicity: 6 300 ug/liter

Chronic toxicity: 5 000 ug/liter

Human Health

Criterion: 143 mg/liter

NIOSH Recommended Standards: 375 mg/m³ TWA
560 mg/m³ STEL

OSHA Standards: 750 mg/m³ TWA
1,120 mg/m³ Ceiling Level

ACGIH Threshold Limit Value: 100 ppm TWA
375 mg/m³ TWA
150 ppm STEL
560 mg/m³ STEL

1.1.1-TRICHLOROETHANE

Summary

Preliminary results suggest that 1,1,1-trichloroethane (1,1,1-TCA) induces liver tumors in female mice. It was shown to be mutagenic using the Ames assay and it causes transformation in cultured rat embryo cells. Inhalation exposure to high concentrations of 1,1,1-TCA depressed the central nervous system, affected cardiovascular function, and damaged the lungs, liver, and kidneys in animals and humans. Irritation of the skin and mucous membranes has also been associated with human exposure to 1,1,1-trichloroethane.

CAS Number 71-55-6

Chemical Formula CH_3CCl_3

IUPAC Name 1,1,1-Trichloroethane

Important Synonyms and Trade Names. Methyl chloroform, chlorothene, 1,1,1-TCA

Chemical and Physical Properties

Molecular Weight 133.4

Boiling Point 74.1°C

Melting Point -30.4°C

Specific Gravity 1.34 at 20°C (liquid)

Solubility in Water: 480-4,400 mg/liter at 20°C (several divergent values were reported in the literature)

Solubility in Organics: Soluble in acetone, benzene, carbon tetrachloride, methanol, ether, alcohol, and chlorinated solvents

Log Octanol/Water Partition Coefficient 2.17

Vapor Pressure 123 mm Hg at 20°C

Vapor Density 4.63

Transport and Fate

1,1,1-Trichloroethane (1,1,1-TCA) disperses from surface water primarily by volatilization. Several studies have indicated that 1,1,1-trichloroethane may be adsorbed onto organic materials in the sediment, but this is probably not an important route of elimination from surface water. 1,1,1-Trichloroethane can be transported in the groundwater, but the speed of transport depends on the composition of the soil.

Photooxidation by reaction with hydroxyl radicals in the atmosphere is probably the principal fate process for this chemical.

Health Effects

1,1,1-Trichloroethane was retested for carcinogenicity because in a previous study by NCI, early lethality precluded assessment of carcinogenicity. Preliminary results indicate that 1,1,1-TCA increased the incidence of combined hepatocellular carcinomas and adenomas in female mice when administered by gavage. There is evidence that 1,1,1-trichloroethane is mutagenic in Salmonella typhimurium and causes transformation in cultured rat embryo cells. These data suggest that the chemical may be carcinogenic.

Other effects of 1,1,1-TCA are seen only at concentrations well above those likely in an open environment. The most notable toxic effects of 1,1,1-trichloroethane in humans and animals are central nervous system depression, including anesthesia at very high concentrations and impairment of coordination, equilibrium, and judgment at lower concentrations (350 ppm and above); cardiovascular effects, including premature ventricular contractions, decreased blood pressure, and sensitization to epinephrine-induced arrhythmia, and adverse effects on the lungs, liver, and kidneys. Irritation of the skin and mucous membranes resulting from exposure to 1,1,1-trichloroethane has also been reported. The oral LD₅₀ value of 1,1,1-trichloroethane in rats is about 11,000 mg/kg.

Regulations and Standards

Ambient Water Quality Criteria (U.S. EPA):

Aquatic Life

The available data are not adequate for establishing criteria. However, EPA did report the lowest values of the two trichloroethanes (1,1,1 and 1,1,2) known to be toxic in aquatic organisms.

Freshwater

Acute toxicity: 18 mg/liter
Chronic toxicity: 84 mg/liter

TRICHLOROETHYLENE

Summary

Trichloroethylene (TCE) induced hepatocellular carcinomas in mice and was mutagenic when tested using several microbial assay systems. Chronic inhalation exposure to high concentrations caused liver, kidney, and neural damage and dermatological reactions in animals

CAS Number 79-01-06

Chemical Formula C_2HCl_3

IUPAC Name: Trichloroethene

Important Synonyms and Trade Names Trichloroethene TCE, and ethylene trichloride

Chemical and Physical Properties

Molecular Weight: 131.5

Boiling Point $87^{\circ}C$

Melting Point $-73^{\circ}C$

Specific Gravity 1.4642 at $20^{\circ}C$

Solubility in Water 1,000 mg/liter

Solubility in Organics: Soluble in alcohol, ether, acetone, and chloroform

Log Octanol/Water Partition Coefficient: 2.29

Vapor Pressure: 60 mm Hg at $20^{\circ}C$

Vapor Density 4.53

Transport and Fate

Trichloroethylene (TCE) rapidly volatilizes into the atmosphere where it reacts with hydroxyl radicals to produce hydrochloric acid, carbon monoxide, carbon dioxide, and carboxylic acid. This is probably the most important transport and fate process for trichloroethylene in surface water and in the upper layer of soil. TCE adsorbs to organic materials and can be bioaccumulated to some degree. However, it is unclear whether trichloroethylene bound to organic material can be degraded by

Saltwater

Acute toxicity 31.2 mg/liter

Chronic toxicity No available data

Human Health

Criterion 18.4 mg/liter

NIOSH Recommended Standard 350 ppm (1.910 mg/m³)/15 min Ceiling Level

OSHA Standard: 350 ppm (1.910 mg/m³) TWA

ACGIH Threshold Limit Value 350 ppm TWA
 1 400 mg/m³ TWA
 450 ppm STEL
 2 450 mg/m³ STEL

1,1,2-TRICHLOROETHANE

Summary

1,1,2-Trichloroethane induced liver tumors and pheochromocytomas in mice. It caused liver and kidney damage in dogs.

CAS Number: 79-00-5

Chemical Formula: $\text{CH}_2\text{ClCHCl}_2$

IUPAC Name: 1,1,2-Trichloroethane

Important Synonyms and Trade Names: Vinyl trichloride, ethane trichloride

Chemical and Physical Properties

Molecular Weight: 133.41

Boiling Point: 133.8°C

Melting Point: -36.5°C

Specific Gravity: 1.4397 at 25°C

Solubility in Water: 4,500 mg/liter at 20°C

Solubility in Organics: Soluble in alcohol, ether, and chloroform

Log Octanol/Water Partition Coefficient: 2.17

Vapor Pressure: 19 mm Hg at 20°C

Vapor Density: 4.63

Transport and Fate

Volatilization and subsequent photooxidation in the troposphere are probably the primary transport and fate processes for 1,1,2-trichloroethane. Some sorption, bioaccumulation, and biodegradation may occur, but these processes are probably not very important processes for trichloroethane transport or fate.

1,1,2-Trichloroethane induced hepatocellular carcinomas and pheochromocytoma of the adrenal gland in male and female mice but did not produce a significant increase in tumor incidence in male or female rats. It was not mutagenic when tested using the Ames assay. No information was found concerning the reproductive toxicity or

nicity of 1,1,2-trichloroethane. No chronic studies were found on the toxicity of 1,1,2-trichloroethane but single doses as low as 400 mg/kg caused liver and kidney damage. The oral LD₅₀ value for 1,1,2-trichloroethane in rats is 835 mg/kg.

Exposure and Standards

1. Water Quality Criteria (U.S. EPA)

Aquatic Life

The available data are not sufficient for establishing criteria. However, EPA did report the lowest values known to be toxic in aquatic organisms:

Freshwater

Acute toxicity: 18,000 ug/liter
Chronic toxicity: 9,400 ug/liter

Saltwater

Acute toxicity: No available data
Chronic toxicity: No available data

Human Health

Estimates of the carcinogenic risks associated with lifetime exposure to various concentrations of 1,1,2-trichloroethane in water are:

<u>Risk</u>	<u>Concentration</u>
10 ⁻⁵	6.0 ug/liter
10 ⁻⁶	0.6 ug/liter
10 ⁻⁷	0.06 ug/liter

Estimated Risk (U.S. EPA): $5.7 \times 10^{-2} \text{ (mg/kg/day)}^{-1}$

Threshold Limit Value: 10 ppm TWA (skin)
45 mg/m³ TWA (skin)

and was
inhalation
damage and

reacts with
dioxide, and
process for
adsorbs to
it is unclear
degraded by

microorganisms or must be desorbed to be destroyed. There is some evidence that higher organisms can metabolize TCE. Trichloroethylene leaches into the groundwater fairly readily, and it is a common contaminant of groundwater around hazardous waste sites.

Health Effects

Trichloroethylene is carcinogenic to mice after oral administration, producing hepatocellular carcinomas. It was found to be mutagenic using several microbial assay systems. Trichloroethylene does not appear to cause reproductive toxicity or teratogenicity. TCE has been shown to cause renal toxicity, hepatotoxicity, neurotoxicity, and dermatological reactions in animals following chronic exposure to levels greater than 2,000 mg/m³ for 6 months. Trichloroethylene has low acute toxicity; the acute oral LD₅₀ value in several species ranged from 6,000 to 7,000 mg/kg.

Regulations and Standards

Ambient Water Quality Criteria (US EPA)

Aquatic Life

The available data are not adequate for establishing criteria. However, EPA did report the lowest values known to have toxic effects in aquatic organisms.

Freshwater

Acute toxicity: 45 mg/liter
Chronic toxicity: No available data

Saltwater

Acute toxicity: 2 mg/liter
Chronic toxicity: No available data

Human Health

Estimates of the carcinogenic risks associated with lifetime exposure to various concentrations of trichloroethylene in water are:

<u>Risk</u>	<u>Concentration</u>
10 ⁻⁵	27 ug/liter
10 ⁻⁶	2.7 ug/liter
10 ⁻⁷	0.27 ug/liter

CAG Unit Risk (U.S. EPA) $1.1 \times 10^{-2} \text{ (mg/kg/day)}^{-1}$

NIOSH Recommended Standards (air):

540 mg/m^3 TWA

760 mg/m^3 10-min Ceiling Level

OSHA Standard (skin):

540 mg/m^3 TWA

1,075 mg/m^3 15-min Ceiling Level

1,620 mg/m^3 for 5 min every 3 hr. Peak Concentration

ACGIH Threshold Limit Values. 50 ppm TWA

270 mg/m^3 TWA

200 ppm STEL

1,080 mg/m^3 STEL

Construction Coordinator' Log

JOSE GARCIA

CONSTRUCTION INC.

General Contractors

Jose (Joe) Garcia
President

2963 West 91st Place
Denver, CO 80221

An Equal Opportunity Employer

Robert E. James
Principal Engineer
Waste Process & Design Engineering

Rocky Flats Plant
Aerospace Operations
Rockwell International Corporation
P O Box 484
Golden Colorado 80402-0484

(303) 966-5006

Contractor to U S
Department of Energy

D 1029
D-1647
Rockwell International

Bill Buening x5017 PA.
OR MIKE FREEHLING 7743

PROJECT NAME

REMEDIAL ACTION, 881 HILLSIDE, PHASE I

FOUNDATION & SLAB PAD.

CONTRACT NUMBER

58923JK AUTH # 986147

CONTRACTOR

JOSE GARCIA CONSTRUCTION, INC

FIELD OFFICE PH# 5654

RA. Bill Buening x5017

PE MIKE Freehling x7743

PE Bob James x5004

Contract Admin. RJ. Russo x7703

DOE. D. CoE

USER GREENGARD

VOLUME #/ OF

WEATHER	AM	PM
SUNNY	✓	✓
CLOUDY		
RAIN		
SNOW		
< 40° F		
40° - 60° F	✓	✓
60° - 80° F		
> 80° F		

WORK FORCE	NO
SUPER	1
FOREMAN	3
CARPENTER	1
CARPET LAYER	
CEMENT FIN	
DRY WALL	
ELECTRICIAN	
GLAZER	
INSTRUMENT	
INSULATOR	
IRON WORKER	
LABORER	1
MASON	
MILLWRIGHT	
OPR ENGR	3
PAINTER	
PIPE FITTER	
PLUMBER	
ROOFER	
SHEET METAL	
TEAMSTER	2
TILE SETTER	
monitor	1
TOTAL	
EQUIPMENT	
Truck Dump	2
Backhoe	1
Front end loader	1
Pick-up	1
Tractor	1

AUTHORIZATION OR CONTRACT NO 986147

DATE 1-15-90

DAY Monday

SHEET 1 OF 1

INSPECTOR Mike Dugan

PROGRESS

Issued work permit & Excavation permit. B. to B. Briefed Contractor, no instructions. By RCRA, the Moni. Surveyed area, & signed off permits, & cleared hauling material to land fill.

The media - EG & G show up taking photo & tape recording of ground breaking. The Communications EG & G News - Also tasked her to get a statement of abg. use from Ron Ellis.

Started & Complete removal approx 80% of excavation. Set up Butler Box Babasax - light & roped off area.

DELAYS Garcia's Const. Supt. Called & stated the site was closed at the land fill. Dumping of trucks - delayed. 12:30 pm. meeting at landfill with trucking & Contractor for location to dump.

PROBLEMS/RESOLUTIONS

1) The dump at landfill - is closed for trucks 9:00 AM & 11:20 AM. & stops closed after 2 pm. notified - H. Have some breaking will gave us a alt. Site to dump.

REMARKS

during hours that the GATE IS closed

2) Submittals prepared to date are: 1) Re-inforcement 2) Concrete 3) Ruberia 4) Class I backfill 5) Water stop

MEETING/SUBJECT

[Signature]

WEATHER	AM	PM
SUNNY	✓	✓
CLOUDY		
RAIN		
SNOW		
< 40° F	✓	
40° - 60° F		
60° - 80° F		
> 80° F		

WORK FORCE	NO
SUPER	1
FOREMAN	2
CARPENTER	1
CARPET LAYER	
CEMENT FIN	
DRY WALL	
ELECTRICIAN	
GLAZER	
INSTRUMENT	
INSULATOR	
IRON WORKER	
LABORER	1
MASON	
MILLWRIGHT	
OPR ENGR	2
PAINTER	
PIPE FITTER	
PLUMBER	
ROOFER	
SHEET METAL	
TEAMSTER	1
TILE SETTER	
monitored HP	1

TOTAL	
EQUIPMENT	
Back Hoe	
Front End Loader	
Dump Truck	
Pickup - Transit	
Generator..	

AUTHORIZATION OR CONTRACT NO 986147

DATE JAN 16, 1990 DAY TUESDAY SHEET 2 C

INSPECTOR I. DURAN

PROGRESS

REVIEWED THE PROJECT SIGNED WORK EXTENSION, BY B. L. & Berde sign the work permit.

CONTRACTOR CONTINUES TO EXCAVATE 2 GRADE SITE, STARTED SETTING FORM FOR FOOTING FOR CONCRETE WALL

YOU ELLIS, CONTACTED CM&I IN ORDER TO HAVE A GENERATOR STANDBY AT THE SITE FOR AIR MONITORING (1-15-90). C PICK UP GENERATOR. BOB CROCKER GAVE LOCATION OF MONITOR CONTRACTOR - Roped off site AND PLACED yellow ribbon 6' apart to identify the rope re-locate construction AT SITE AREA. (P22)

NOTE: ISSUED FC021 FOR CONTRACTOR TO MOVE & SERVICE TEMPORARY GEN. FOR 30 DAYS TO MAINTAIN THE AIR MONITOR IN OPERATION PER PA & R. ELLIS

DELAYS 1st approx. 1 1/2 hours on excavation. TO AIR MONITOR WAS NOT FUNCTIONAL IN CONTRACTOR SUPPLY A TEMP. GENERATOR AND SITE SURVEY. PLUGGED THE UNIT IN AND THE AIR MONITOR WAS BACK IN USE

PROBLEMS/RESOLUTIONS

R. ELLIS DID NOT WANT ANY EXCAVATION TO TAKE PLACE UNTIL THE AIR MONITOR WAS BACK IN SERVICE (PER JOE HERBERT).

REMARKS

REVIEWED LOCATION WITH ENV. (CROCKER) AND NOTIFIED R. ELLIS, PA & RE. THE ELECT. PE LUDKE. TO MAKE SKETCH FOR AGREEMENT FOR AIR MONITOR & TEMPORARY FOR CONST. SITE MEETING/SUBJECT AND. HAVE PLANT POWER SET UP FOR THE INSTALLATION OF POWER POLES & DIST. ON THE POWER SYSTEM. (P22)

DAILY LOST TIME REPORT

DATE 1-16-90

AUTHORIZATION NO: _____

CONTRACT NO: 58923 JKJOB TITLE: Hill Side Building 891CONTRACTOR: JOSE GARCIA ConstTIME OF DELAY FROM 8:00 ~~am~~-pm TO 9:00 ~~am~~-pmTOTAL HOURS LOST: 8REASON FOR DELAY

Ordered By IKE DURAN until AIR
monitor SERVICE set up.

Info EG44: Potentially Den. Failed Contractor
Re-Summit Den. *[Signature]*

LIST OF MEN AND TRADES DELAYED

PAUL COVARELLAS	Supt	1 Hour
Tony SAILAS	Carpenter	1 Hour
LOUIS GARCIA	Forman	1 Hour
Phil COVARELLAS	Forman	1 Hour
Howard Smithgall	operator	1 Hour
ORLANDO HERRERA	OPERATOR	1 Hour

LIST OF EQUIPMENT DELAYED

ONE EACH BACK HOR

ONE EACH FRONT END Loader

The delay described above has been agreed upon by the RI
representative and the contractor representative involved.

CONTRACTOR REP: Paul A. Covarellas DATE 1-16-90CONST. COORD: [Signature] DATE 1-16-90PROJECT ADM: Wm J. Fleming DATE 1-16-90

WEATHER	AM	PM
SUNNY	✓	✓
CLOUDY		
RAIN		
SNOW		
< 40° F	✓	
40° - 60° F		✓
60° - 80° F		
> 80° F		

WORK FORCE	NO
SUPER	1
FOREMAN	
CARPENTER	1
CARPET LAYER	
CEMENT FIN	
DRY WALL	
ELECTRICIAN	
GLAZER	
INSTRUMENT	
INSULATOR	
IRON WORKER	
LABORER	1
MASON	
MILLWRIGHT	
OPR ENGR	2
PAINTER	
PIPE FITTER	
PLUMBER	
ROOFER	
SHEET METAL	
TEAMSTER	
TILE SETTER	
monitors NO	1

TOTAL	
EQUIPMENT	
Back Hoe	
Front End Loader	
Dump Truck	
Pickup truck	
Generator	

AUTHORIZATION OR CONTRACT NO 986147
DATE Jan 17, 1990 DAY Wednesday SHEET 3 OF 3
INSPECTOR I. Dueto

PROGRESS

Reviewed Project signed work extension permit, no safety infractions noted.

Contractor continues to cover excavation every day & make unear it in the mornings to keep frost out & continue to build & place footing forms.

Not: R. Ellis Call at 3:45 last night wanted to brief him on start of excavation for an EGG Rep. (Communication). How the sequence start & is to start. Notified L. Higgins Area. This morning. The I. attend a meeting with Ron & approx.

DELAYS - none note

Not:

Received Communication note, of loss line yesterday. & showing manpower & craft listings.

PROBLEMS/RESOLUTIONS

P. B. Jones & M. Fickling went over project. Released info. informing all (in-lac) submitted to Contractor at 1:20 am today. note: 5 day turnar

REMARKS

B. Jones - went over problem of some excavations & foundations. per Spect. Section 2200-9 last per. Due to rain & no rain expected & Spect. covered total project & no just the walls & floors. Would send me a little of intent of revision.

WEATHER	AM	PM
SUNNY		
CLOUDY	✓	✓
RAIN		
SNOW	✓	✓
< 40°F	✓	✓
40° - 60°F		
60° - 80°F		
> 80°F		

WORK FORCE	NO
SUPER	1
FOREMAN	
CARPENTER	
CARPET LAYER	
CEMENT FIN	
DRY WALL	
ELECTRICIAN	
GLAZER	
INSTRUMENT	
INSULATOR	
IRON WORKER	
LABORER	1
MASON	
MILLWRIGHT	
OPR ENGR	
PAINTER	
PIPE FITTER	
PLUMBER	
ROOFER	
SHEET METAL	
TEAMSTER	
TILE SETTER	
monitor VP	1
TOTAL	
EQUIPMENT	

AUTHORIZATION OR CONTRACT NO 986147
DATE 1-18-90 DAY Thursday SHEET 4
INSPECTOR I. Dueson

PROGRESS

REVIEWED PROJECT, NO SAFETY INFRACTION
NOTED SIGNED WORK PERMIT EXTENSION

Contractor CLEANING OFF SNOW
FROM COVERS OFF THE EXHAUSTION
SIT. AND WHEELING IT OFF

Contractor CALLED AND WANTED
TO KNOW WHEN THE PHONE WOULD
BE INSTALLED, 7001 Comm BLDG.
WORKORDERS #7025 STATED THE
FIRST OF THE WEEK. NOTIFIED
THE Contractor Supt.

NO OTHER ACTIVITY ON THE PROJECT.
REINFORCEMENT STEEL IS ON ORDER

DELAYS NONE NOTED

PROBLEMS/RESOLUTIONS

FIRE HYS WAS LEAKING. CONTACTED
CONTRACTOR SUPT. HAD HIM VERIFY
VALVE IS SHUT OFF ALL THE WAY
CALLED CAPT. SECURITY FOR ESCORT
REMARKS WHICH WAS SUPPLIED.

ENGINEERING WORKING OF CONTRA.
MODIFICATION FOR VARIOUS WORK

MEETING/SUBJECT

[Signature]

WEATHER	AM	PM
SUNNY		
CLOUDY	✓	✓
RAIN		
SNOW	✓	✓
< 40°F	✓	✓
40° - 60°F		
60° - 80°F		
> 80°F		

WORK FORCE	NO
SUPER	1
FOREMAN	
CARPENTER	
CARPET LAYER	
CEMENT FIN	
DRY WALL	
ELECTRICIAN	
GLAZER	
INSTRUMENT	
INSULATOR	
IRON WORKER	
LABORER	
MASON	
MILLWRIGHT	
OPR ENGR	
PAINTER	
PIPE FITTER	
PLUMBER	
ROOFER	
SHEET METAL	
TEAMSTER	
TILE SETTER	
monitors	1
TOTAL	
EQUIPMENT	

AUTHORIZATION OR CONTRACT NO 986147

DATE 1-19-90 DAY FRIDAY SHEET 5 OF 5

INSPECTOR J. DURAN

PROGRESS

RENEW PROJECT, NO SAFETY PROBLEMS
NOTED. SIGNED OFF WORK PERMIT
EXTENSION.

No Activity on project to day
DUE TO SNOW. CONTRACTOR
DID NOT UN-COVER EXCAVATION
HE WILL CLEAN OUT SNOW ON
MONDAY IF WEATHER PERMITS

DELAYS none noted

NOTE: FIRST DAY LOST DUE TO
WEATHER

PROBLEMS/RESOLUTIONS

ENGINEERING HAS NOT PROCEEDED TO
CONTRACTOR. ANY MODIFICATIONS TO
CONTRACT NOTED ON FIRST DAY OF
SIGNING OF CONTRACT. ON EXTENDING
REMARKS WALL'S CURB.

MEETING/SUBJECT

[Signature]

WEATHER	AM	PM
SUNNY	✓	✓
CLOUDY		
RAIN		
SNOW		
< 40°F	✓	
40° - 60°F		✓
60° - 80°F		
> 80°F		

WORK FORCE	NO
SUPER	1
FOREMAN	
CARPENTER	1
CARPET LAYER	
CEMENT FIN	
DRY WALL	
ELECTRICIAN	
GLAZER	
INSTRUMENT	
INSULATOR	
IRON WORKER	
LABORER	1
MASON	
MILLWRIGHT	
OPR ENGR	1
PAINTER	
PIPE FITTER	
PLUMBER	
ROOFER	
SHEET METAL	
TEAMSTER	
TILE SETTER	
monitors H.P.	1
TOTAL	
EQUIPMENT	
Generator	
Pink up.	

AUTHORIZATION OR CONTRACT NO 986147

DATE 1-22-90 DAY Monday SHEET 6

INSPECTOR J. Duran

PROGRESS

Issued and posted new work permit

Contractor - started cleaning off the area from the excavation.

Also - Continue with supporting & maintain the Temporary Generator operational.

** Notified Contractor that his phone will be installed the first of this week. DELAYS Phone operators - scheduled.*

PROBLEMS/RESOLUTIONS

Sub-Contractor on heavy equipment was Saturday. 1/2 day servicing his rig & the Temporary Gen. Instructed contractor that in the future to notify our office REMARKS so will soon notify Blawie.

*Contractor - stated his re-informing steel re would be delivered tomorrow. * Safety meeting report received from Supt.*

MEETING/SUBJECT

J. Duran

WEATHER	AM	PM
SUNNY	✓	✓
CLOUDY		
RAIN		
SNOW		
< 40° F	✓	
40° - 60° F		✓
60° - 80° F		
> 80° F		

WORK FORCE	NO
SUPER	1
FOREMAN	
CARPENTER	2
CARPET LAYER	
CEMENT FIN	
DRY WALL	
ELECTRICIAN	
GLAZER	
INSTRUMENT	
INSULATOR	
IRON WORKER	
LABORER	
MASON	
MILLWRIGHT	
OPR ENGR	1
PAINTER	
PIPE FITTER	
PLUMBER	
ROOFER	
SHEET METAL	
TEAMSTER	
TILE SETTER	
monitor HP	1
TOTAL	
EQUIPMENT	
Portable Generator	
Pick up.	

AUTHORIZATION OR CONTRACT NO 986147

DATE 1-23-90 DAY Tuesday SHEET 7 OF 7

INSPECTOR I. Duran

PROGRESS

Reviewed project & signed off
work permit extension. High wind
noted on site.

No Activity - on excavation.

Note: Contractor called about water
stop. specified in the drawings.
Manufacturer had stated this
particular one was not being
made anymore. Wanted PVC type
approved. Which was approved by the
core of engineers.

Contracted (PE) M. Franklin. He would
approve it. Also to follow up with
a submittal. Delivery date is
delays about 4 weeks.

High winds for 1/2 day approx. no
work on site.

Some work in there trailer was
in progress.

PROBLEMS/RESOLUTIONS

Contractor - did not receive
the re-inforcing steel (rebar).

REMARKS

Contractor continues to service &
maintain the portable gen. operatn.
keeping the air monitor on.

MEETING/SUBJECT

I. Duran

DAILY LOST TIME REPORT

DATE 1-23-90

AUTHORIZATION NO: 986147

CONTRACT NO: 58923 JK

JOB TITLE: Hill side Building 891

CONTRACTOR: Jose Garcia Const

TIME OF DELAY FROM 7:00 am-pm TO 9:20 am-pm

TOTAL HOURS LOST: 2^{hr} 20 min.

REASON FOR DELAY

High winds — ordered by FKE DURAN

LIST OF MEN AND TRADES DELAYED

PAUL A COVARRUBIAS - FORMAN.
TONY SAILAS - CARPENTER
JAMES SAILAS - CARPENTER

LIST OF EQUIPMENT DELAYED

The delay described above has been agreed upon by the RI representative and the contractor representative involved.

CONTRACTOR REP: Paul A Covarrubias DATE 1-21-90

CONST. COORD: James Hillman DATE 1-31-90

PROJECT ADM: Wm T Bunniga DATE 2-2-90

WEATHER	AM	PM
SUNNY	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
CLOUDY	<input type="checkbox"/>	<input type="checkbox"/>
RAIN	<input type="checkbox"/>	<input type="checkbox"/>
SNOW	<input type="checkbox"/>	<input type="checkbox"/>
< 40° F	<input checked="" type="checkbox"/>	<input type="checkbox"/>
40° - 60° F	<input type="checkbox"/>	<input checked="" type="checkbox"/>
60° - 80° F	<input type="checkbox"/>	<input type="checkbox"/>
> 80° F	<input type="checkbox"/>	<input type="checkbox"/>

WORK FORCE	NO
SUPER	1
FOREMAN	
CARPENTER	1
CARPET LAYER	
CEMENT FIN	
DRY WALL	
ELECTRICIAN	
GLAZER	
INSTRUMENT	
INSULATOR	
IRON WORKER	
LABORER	1
MASON	
MILLWRIGHT	
OPR ENGR	1
PAINTER	
PIPE FITTER	
PLUMBER	
ROOFER	
SHEET METAL	
TEAMSTER	
TILE SETTER	
monitor H.P.	1
TOTAL	
EQUIPMENT	
Portable Gen.	
misc. Small	
Per. Tools	

AUTHORIZATION OR CONTRACT NO 986147
DATE 1-24-90 DAY Wednesday SHEET 8
INSPECTOR J. Duen

PROGRESS

Contractor started setting re-bar at re-inforcement & if possible would footer pads.

Contractor - Covered site, secured all loose material & clean up area

Work permit signed off work extension no field or safety problems noted

DELAYS none noted

PROBLEMS/RESOLUTIONS

none

REMARKS

Contractor continues to service portable gen for air monitor operation

MEETING/SUBJECT

[Signature]

WEATHER	AM	PM
SUNNY	✓	✓
CLOUDY		
RAIN		
SNOW		
< 40°F	✓	✓
40° - 60°F		✓
60° - 80°F		
> 80°F		

WORK FORCE	NO
SUPER	1
FOREMAN	
CARPENTER	2
CARPET LAYER	
CEMENT FIN	
DRY WALL	
ELECTRICIAN	
GLAZER	
INSTRUMENT	
INSULATOR	
IRON WORKER	
LABORER	2
MASON	
MILLWRIGHT	
OPR ENGR	1
PAINTER	
PIPE FITTER	
PLUMBER	
ROOFER	
SHEET METAL	
TEAMSTER	
TILE SETTER	
MONITOR	
TOTAL	
EQUIPMENT	
PORTABLE	
GEN.	
MISC. SMALL	
POWER TOOLS	

AUTHORIZATION OR CONTRACT NO 986147

DATE 1-25-90 DAY THURSDAY SHEET 9 OF 9

INSPECTOR I Dugan

PROGRESS

REVIEWED PROJECT AND SAFETY PROBLEMS OR INTERACTION WERE NOTED.

SIGNED OFF WORK PERMIT EXTENSION.

Contractor - CONTINUING WORK ON SETTING UP FOOTER PAD FORMS.

* HAD ENGINEERING RECHECK SITE OF BUILDING PAD FOR VERIFICATION OF ELEV. & LOCATION. VERIFIED SQUARENESS OF LAYOUT WORK.

ENGINEERING STATED ITS LOCATED CORRECTLY. (1" OUT OF SQ) CONTRACTOR CORRECTED ONE CORNER THAT WAS OUT. * ELEV. & LOCATION SETTING HAVE BEEN VERIFIED ENG. TO SEND ME COPY OF REPORT.

DELAYS

HI WINDS - OFF & ON ALL DURING THE DAY.

Contractor - LOST TWO HOURS IN THE MORNING.

B. LA BORDS - GAVE RELEASE TO GO ON PROBLEMS/RESOLUTIONS WITH CONST. & TO TAKE THE CARE WITH ANY FLYING MATERIAL AS LONG AS WORK WAS ON THE GROUND.

REMARKS

Contractor CONTINUING TO SERVICE TEMPORARY PORTABLE GEN. FOR AIR MONITOR OPERATION

MEETING/SUBJECT

[Signature]

DAILY LOST TIME REPORT

DATE 1-25-90

AUTHORIZATION NO: 986147

CONTRACT NO: 58923 JK

JOB TITLE: Hill Side Building 891

CONTRACTOR: Jose Garcia Const

TIME OF DELAY FROM 7.00 am-pm TO 9.00 am-pm

TOTAL HOURS LOST: 2

REASON FOR DELAY

High Winds - ordered by IKE DURAN

LIST OF MEN AND TRADES DELAYED

Paul Covarrubias - Foreman
Tony Salinas - Carpenter
James Salinas - Carpenter

LIST OF EQUIPMENT DELAYED

The delay described above has been agreed upon by the RI representative and the contractor representative involved.

CONTRACTOR REP: Paul H. Covarrubias DATE 1-31-90

CONST. COORD: Duane Duran DATE 1-31-90

PROJECT ADM: Wm Brummer DATE 2-1-90

WEATHER	AM	PM
SUNNY	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
CLOUDY	<input type="checkbox"/>	<input type="checkbox"/>
RAIN	<input type="checkbox"/>	<input type="checkbox"/>
SNOW	<input type="checkbox"/>	<input type="checkbox"/>
< 40° F	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
40° - 60° F	<input type="checkbox"/>	<input type="checkbox"/>
60° - 80° F	<input type="checkbox"/>	<input type="checkbox"/>
> 80° F	<input type="checkbox"/>	<input type="checkbox"/>

WORK FORCE	NO
SUPER	1
FOREMAN	
CARPENTER	1
CARPET LAYER	
CEMENT FIN	
DRY WALL	
ELECTRICIAN	
GLAZER	
INSTRUMENT	
INSULATOR	
IRON WORKER	
LABORER	
MASON	1
MILLWRIGHT	
OPR ENGR	1
PAINTER	
PIPE FITTER	
PLUMBER	
ROOFER	
SHEET METAL	
TEAMSTER	
TILE SETTER	
Monitor H.P.	1
TOTAL	
EQUIPMENT	
Portable GEN.	
Misc. Small Power Tools	

AUTHORIZATION OR CONTRACT NO 986147

DATE 1-26-90 DAY FRIDAY SHEET 10

INSPECTOR D. Huan

PROGRESS

REVIEWED CONSTRUCTION SITE, NO PROBLEMS
NOTED ON SAFETY IN FROSTAINS
Signed off WORK PERMIT EXTENSION

Contractor - CONTINUES TO SET
FOOTER FORMS & TIE-IN
RE BAR STEEL.

SITE COVERED AT END OF WORK
DAY AND ALL LOOSE MATERIAL
SECURED. TRASH HAS BEEN REMOVED

Contractor CONTINUES TO SERVICE
PORTABLE GEN. FOR AIR MONITOR
TEMPORARILY POWER

DELAYS

NONE NOTED

PROBLEMS/RESOLUTIONS

NO - PROBLEMS NOTED

REMARKS

NONE.

MEETING/SUBJECT

D. Huan

WEATHER	AM	PM
SUNNY	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
CLOUDY	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
RAIN	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
SNOW	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
< 40°F	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
40° - 60°F	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
60° - 80°F	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
> 80°F	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

WORK FORCE	NO
SUPER	1
FOREMAN	1
CARPENTER	2
CARPET LAYER	
CEMENT FIN	
DRY WALL	
ELECTRICIAN	
GLAZER	
INSTRUMENT	
INSULATOR	
IRON WORKER	
LABORER	1
MASON	
MILLWRIGHT	
OPR ENGR	1
PAINTER	
PIPE FITTER	
PLUMBER	
ROOFER	
SHEET METAL	
TEAMSTER	
TILE SETTER	
monitor #1	
TOTAL	
EQUIPMENT	
PORTABLE GEN.	
Miss Smack	
Tool Pwr.	

AUTHORIZATION OR CONTRACT NO 986147

DATE Monday DAY 1-29-96 SHEET 11 OF 11

INSPECTOR J. L. Luman

PROGRESS

REVISED PROJECT AND SIGNED OFF WORK PERMIT EXTENSION

ALL WORK CLOSE DOWN PER PLANT SHIFT. Supt.

Approval - To proceed with SETTING RE-BAIR AND FOOTIN FORMS.

TESTING REP. TOOK TESTS ON COMPACTION. NO PROBLEMS NOTED. RESULTS OF TESTS WERE 95% PLUS COMPACTION & NONE DISTURBED SOIL. TEST THE SAME.

CONTRACTOR CONTINUES TO SERVICE PORTABLE GEN. FOR AIR MONITOR POWER

DELAYS

HIGH WINDS. PLANT SHIFT Supt. FOR OVER HALF DAY.

DELAYED STEEL & FORM SETTING WORK
PROBLEMS/RESOLUTIONS

REMARKS

Received Safety meeting Report from Contractor. Supt.

MEETING/SUBJECT

J. L. Luman

DAILY LOST TIME REPORT

DATE 1-29-90

AUTHORIZATION NO: 986147

CONTRACT NO: 58923 JK

JOB TITLE: Hillside Building 891

CONTRACTOR: Jose Garcia Const

TIME OF DELAY FROM 8:35 ~~am~~ pm TO 12:30 ~~am~~ pm

TOTAL HOURS LOST: 5

REASON FOR DELAY

Hi winds — ordered By FKE DURAN

LIST OF MEN AND TRADES DELAYED

Paul Covareubias - FORMAN
Louis Garcia - FORMAN
Tony Saitas - CARPENTER
James Saitas - CARPENTER

LIST OF EQUIPMENT DELAYED

The delay described above has been agreed upon by the RI representative and the contractor representative involved.

CONTRACTOR REP: Paul A Covareubias

DATE 1-31-90

CONST. COORD: James Saitas

DATE 1-31-90

PROJECT ADM: Wm Brumger

DATE 2-1-90

WEATHER	AM	PM
SUNNY	✓	
CLOUDY		
RAIN		
SNOW		
< 40°F	✓	
40° - 60°F	✓	
60° - 80°F		
> 80°F		

WORK FORCE	NO
SUPER	1
FOREMAN	1
CARPENTER	4
CARPET LAYER	
CEMENT FIN	
DRY WALL	
ELECTRICIAN	
GLAZER	
INSTRUMENT	
INSULATOR	
IRON WORKER	
LABORER	1
MASON	
MILLWRIGHT	
OPR ENGR	1
PAINTER	
PIPE FITTER	
PLUMBER	
ROOFER	
SHEET METAL	
TEAMSTER	
TILE SETTER	
Monitor HP	1
TOTAL	
EQUIPMENT	
PORTABLE GEN.	
SMALL PWR.	
TOOLS	

AUTHORIZATION OR CONTRACT NO 986147
DATE 1-30-90 DAY Tuesday SHEET 12
INSPECTOR J. D. DUNN

PROGRESS

- 1) Reviewed project no safety or other Problems were noted. Signed off Work permit extensions
- 2) Contractor placed 12.5 yd of concrete :
Testing Lab Present 3" slump.
4 Test Cylinders Taken.
Copy of mix ticket in file.
- 3) All concrete placed was covered, also Covered the excavations.
- 4) General clean up Completed by Contractor

DELAYS none noted;

PROBLEMS/RESOLUTIONS

REMARKS

Contractor continues to service the portable generator for the Air Monitor power.

MEETING/SUBJECT

J. D. Dunn

WEATHER	AM	PM
SUNNY	✓	✓
CLOUDY		
RAIN		
SNOW		
< 40°F	✓	
40° - 60°F		
60° - 80°F		
> 80°F		

WORK FORCE	NO
SUPER	1
FOREMAN	1
CARPENTER	4
CARPET LAYER	M
CEMENT FIN	
DRY WALL	
ELECTRICIAN	
GLAZER	
INSTRUMENT	
INSULATOR	
IRON WORKER	
LABORER	1
MASON	
MILLWRIGHT	
OPR ENGR	1
PAINTER	
PIPE FITTER	
PLUMBER	
ROOFER	
SHEET METAL	
TEAMSTER	1
TILE SETTER	
MONITOR HP	1
TOTAL	
EQUIPMENT	
PORTABLE GEN.	
MISC. SMALL	
PWR. TOOLS	
BACK HOE	

AUTHORIZATION OR CONTRACT NO 986147

DATE 1-31-90

DAY Wednesday SHEET 13 OF 13

INSPECTOR I. Duran

PROGRESS

Reviewed Project NO SAFETY INFRINGEMENTS
NOTED SIGNED OFF WORK PERMITTED
EXTENSION

Contractor. REMOVED LOWER ROOFER
FORMS. AND FILLED VOIDS
WITH BACK FILL. COMPACTED
SAME SECTIONS AROUND FOOTER
AND STARTED SETTING FOUNDATION
WALL FORMS.

① Contractor: RESTACKED EGG BLDG (NEW)
MATERIAL & Banded it.
SEE: Inspection Report.

DELAYS None Noted

PROBLEMS/RESOLUTIONS

Contractor had some problems with
ORDERING THE CORRECT TYPE OF WATER
STOP MATERIAL. NOTIFIED P.E. FOR
RESPONSE.

REMARKS

① SAFETY Toured Project. Contractor stated that
EGG. NEW BLDG. MATERIAL was in
AN UN SAFE CONDITION STACKED.

MEETING/SUBJECT

[Signature]

WEATHER	AM	PM
SUNNY	✓	✓
CLOUDY		
RAIN		
SNOW		
< 40°F	✓	
40° - 60°F		✓
60° - 80°F		
> 80°F		

WORK FORCE	NO
SUPER	1
FOREMAN	1
CARPENTER	4
CARPET LAYER	
CEMENT FIN	
DRY WALL	
ELECTRICIAN	
GLAZER	
INSTRUMENT	
INSULATOR	
IRON WORKER	
LABORER	1
MASON	
MILLWRIGHT	
OPR ENGR	1
PAINTER	
PIPE FITTER	
PLUMBER	
ROOFER	
SHEET METAL	
TEAMSTER	
TILE SETTER	
MONITOR NP 1	1
TOTAL	
EQUIPMENT	
POURER GEN.	
MISC. SMALL	
PUMP TOOLS	
FORK LIFT	

AUTHORIZATION OR CONTRACT NO 986147
DATE 2-1-90 DAY Thursday SHEET 14
INSPECTOR J. Duran
PROGRESS WENT OVER PROJECT NO SAFETY IT
ROUND TO BE INFRACTIONS SIGNED
WORK PERMIT EXTENSION.

Contractor - Setting forms & ties on
inter wall.

Completed setting inter wall form
& started lining up the wall
& re-inforcing it.

Contacted EG&G PE & Jones about the
type of water stops. Confirmed that
it was to be serrated with center bul
9" in width type 718. Was confirmed
& notified PA. of confirmation and
with factory made splices. Per
Contractor Supt.

DELAYS NONE: NOTED

PROBLEMS/RESOLUTIONS

* SAFETY. INSPECTED SITE. CONTRACTOR STATE
IT. LOOKED OK.

I WAS NOT CONTACTED OF THIS TOUR.

REMARKS

1) CONTRACTOR - COMPLETED INSTALLATION OF
IN HIS TRAILER. MY PHONE COMPANY.
2) ASKED PE ON APPROVALS ON BOWTIE (B)
SUBMITTING - CONTRACTOR NEEDS RER

MEETING/SUBJECT

J. Duran

WEATHER	AM	PM
SUNNY	✓	✓
CLOUDY		
RAIN		
SNOW	✓	✓
< 40° F	✓	
40° - 60° F		✓
60° - 80° F		
> 80° F		

WORK FORCE	NO
SUPER	1
FOREMAN	1
CARPENTER	4
CARPET LAYER	
CEMENT FIN	
DRY WALL	
ELECTRICIAN	
GLAZER	
INSTRUMENT	
INSULATOR	
IRON WORKER	
LABORER	1
MASON	
MILLWRIGHT	
OPR ENGR	1
PAINTER	
PIPE FITTER	
PLUMBER	
ROOFER	
SHEET METAL	
TEAMSTER	
TILE SETTER	
monitors	1
TOTAL	
EQUIPMENT	
PORTABLE GEN.	
Misc. Small	
PRV. TOOLS	

AUTHORIZATION OR CONTRACT NO 986147

DATE 2-2-90 DAY FRIDAY SHEET 15 OF 15

INSPECTOR I. Duerr

PROGRESS

*Reviewed project - found no safety problems.
Signed off work permit extension.*

Contractor - Continued setting forms.

*9 AM. Home Basis. proj. mgr. for
Joe Bausin Called.*

*Stated. would close down job
due to safety - power tools being
used could cause an electrical
hazard.*

*Contractor serviced temporary Gen
for air monitor power.*

DELAYS

*Weather - snow closed down job. By
Supt. Joe Bausin Called.*

PROBLEMS/RESOLUTIONS

none noted.

REMARKS

** Was issued a new job safety Analysis
from the contractor.*

MEETING/SUBJECT

I. Duerr

WEATHER	AM	PM
SUNNY	✓	✓
CLOUDY		
RAIN		
SNOW	✓	✓
< 40°F	✓	
40° - 60°F		✓
60° - 80°F		
> 80°F		

WORK FORCE	NO
SUPER	1
FOREMAN	1
CARPENTER	1
CARPET LAYER	
CEMENT FIN	
DRY WALL	
ELECTRICIAN	
GLAZER	
INSTRUMENT	
INSULATOR	
IRON WORKER	
LABORER	1
MASON	
MILLWRIGHT	
OPR. ENGR	1
PAINTER	
PIPE FITTER	
PLUMBER	
ROOFER	
SHEET METAL	
TEAMSTER	
TILE SETTER	
monitors H/I	
TOTAL	
EQUIPMENT	
misc. Small	
port. Tools &	
portable Gen.	
for Concl.	

AUTHORIZATION OR CONTRACT NO 286147

DATE 2-5-90 DAY Monday SHEET 1

INSPECTOR L. Hucan

PROGRESS

Issued new work permit, no prob
noted
Contractor - continues work on
re-reinforcing steel & foundation.

Contractor cleaned off snow
from covered excavation.

Sub. Contractor continues to service
portable Gen. for Air Monitor,

DELAYS

* Delayed Contractor on starting work
to new instructions by P.A.
All work involving moving will be
with winds over 15 mph it shall be

PROBLEMS/RESOLUTIONS

Contractor - resumed all re-reinforcing
steel for floor & walls.

REMARKS

* Received Safety meeting report from
Contractor Supt.

MEETING/SUBJECT

L. Hucan

DAILY LOST TIME REPORT

DATE 2-5-90AUTHORIZATION NO: 986147CONTRACT NO: 58923 JKJOB TITLE: Hillside Building 891CONTRACTOR: JOSE GARCIA ConstTIME OF DELAY FROM 7:00 @-pm TO 9:00 @-pmTOTAL HOURS LOST: 8REASON FOR DELAY

AS Instructed by IKE DURAN not to start
work until work Permit is posted

LIST OF MEN AND TRADES DELAYED

Sergat. - PAUL Carrubias ~~FORMAN~~ 2-Hours
Louis Garcia FORMAN 2-Hours
Tony Sailas CARPENTER 3-Hour
TERRY Snyder LABOR 2-Hour

LIST OF EQUIPMENT DELAYED

The delay described above has been agreed upon by the RI
representative and the contractor representative involved.

CONTRACTOR REP: Paul H Carrubias DATE 2-5-90CONST. COORD: Rosell Duran DATE 2-6-90PROJECT ADM: Wm Brumiga DATE 2-12-90

OF

WEATHER	AM	PM
SUNNY	✓	✓
CLOUDY		
RAIN		
SNOW		
< 40°F		
40° - 60°F	✓	✓
60° - 80°F		
> 80°F		

WORK FORCE	NO
SUPER	1
FOREMAN	1
CARPENTER	2
CARPET LAYER	
CEMENT FIN	
DRY WALL	
ELECTRICIAN	
GLAZER	
INSTRUMENT	
INSULATOR	
IRON WORKER	
LABORER	1
MASON	
MILLWRIGHT	
OPR ENGR	1
PAINTER	
PIPE FITTER	
PLUMBER	
ROOFER	
SHEET METAL	
TEAMSTER	
TILE SETTER	
monitor	1
TOTAL	
EQUIPMENT	
Miss. Small	
power tools	
& portable	
Gen for	
Cond Power.	

AUTHORIZATION OR CONTRACT NO 986147DATE 2-6-90 DAY Tuesday SHEET 17 OF 17INSPECTOR James Blum

PROGRESS

Reviewed project & signed off permit extensionContractor uncovered steel and started re-installation of re-barSub Contractor Continues with servicing of portable Gen. for Air monitor power.DELAYS none noted

PROBLEMS/RESOLUTIONS

* Unrated or a light wind Office will notify me of winds over or at 15 mph so I may stop all moving of soil around construction site.

REMARKS

- Safety tour by Mr. Wheeler and my self.
1. more material & plastic required to be stacked & forming material pickup
 2. Vertical steel not cover with caps as

MEETING/SUBJECT installation is in progressBoth items corrected by Supr.James Blum

WEATHER	AM	PM
SUNNY	✓	✓
CLOUDY		
RAIN		
SNOW		
< 40° F		
40° - 60° F	✓	✓
60° - 80° F		
> 80° F		

WORK FORCE	NO
SUPER	1
FOREMAN	1
CARPENTER	1
CARPET LAYER	
CEMENT FIN	
DRY WALL	
ELECTRICIAN	
GLAZER	
INSTRUMENT	
INSULATOR	
IRON WORKER	
LABORER	1
MASON	
MILLWRIGHT	
OPR ENGR	1
PAINTER	
PIPE FITTER	
PLUMBER	
ROOFER	
SHEET METAL	
TEAMSTER	
TILE SETTER	
monitor H ₂ O	1
TOTAL	
EQUIPMENT	
misc. Small port. Tools	
Portable Gen.	
for Const.	
Power	

AUTHORIZATION OR CONTRACT NO 986147
DATE 2-7-90 DAY Wednesday SHEET 18
INSPECTOR J. H. Huan

PROGRESS

Received report and signed off
work permit extension

Contractor Completed installing all
re-bar in the foundation wall
sections.

* Same approval to start setting
outer forms. Butting up
forms around steel.

Sub Contractor Continues to service
the temporary gen. for the
Air Monitor power.

DELAYS none noted.

PROBLEMS/RESOLUTIONS

* Contractor ask to have PB look at in
wall thickness to increase it fr.
6" to 8" thickness. A locate re-
over to clear water stop.

REMARKS

* W. Busby (Weather person) from bi-
game sent a copy of weather re-
port. as of 1-15-90 to date.

MEETING/SUBJECT

J. H. Huan

WEATHER	AM	PM
SUNNY	✓	✓
CLOUDY		
RAIN		
SNOW		
< 40° F		
40° - 60° F	✓	✓
60° - 80° F		
> 80° F		

WORK FORCE	NO
SUPER	1
FOREMAN	1
CARPENTER	1
CARPET LAYER	
CEMENT FIN	
DRY WALL	
ELECTRICIAN	
GLAZER	
INSTRUMENT	
INSULATOR	
IRON WORKER	
LABORER	1
MASON	
MILLWRIGHT	
OPR ENGR	1
PAINTER	
PIPE FITTER	
PLUMBER	
ROOFER	
SHEET METAL	
TEAMSTER	
TILE SETTER	
monitor K.P.	1
TOTAL	
EQUIPMENT	
min. Small port. Gen. for Const. Power.	

AUTHORIZATION OR CONTRACT NO 986147

DATE 2-8-90 DAY Thursday SHEET 19 OF

INSPECTOR J. Huan

PROGRESS

Renewal project & signed off work permit extension. found no safety infractions

Contractor - continues with setting up of forms for the foundation walls (bondbeams).

Sub-Contractor Continues to service the portable Gen. for Air Monitor temporary power.

DELAYS *none noted*

PROBLEMS/RESOLUTIONS

Called (P) in Fredking about water wall re-bas. Per Contractor, required modifying inter layer. to allow new water-stop dimension 9". Which he approved due to the new increased size of the water-stop.

MEETING/SUBJECT

J. Huan

WEATHER	AM	PM
SUNNY	✓	✓
CLOUDY		
RAIN		
SNOW		
< 40°F		
40° - 60°F	✓	✓
60° - 80°F		
> 80°F		

WORK FORCE	NO
SUPER	/
FOREMAN	/
CARPENTER	/
CARPET LAYER	
CEMENT FIN	
DRY WALL	
ELECTRICIAN	
GLAZER	
INSTRUMENT	
INSULATOR	
IRON WORKER	
LABORER	/
MASON	
MILLWRIGHT	
OPR. ENGR	/
PAINTER	
PIPE FITTER	
PLUMBER	
ROOFER	
SHEET METAL	
TEAMSTER	
TILE SETTER	
monitors H.P.	/
TOTAL	
EQUIPMENT	
misc. Small	
port. Tool	
portable Gen.	
for temp. Power	

AUTHORIZATION OR CONTRACT NO 986147

DATE 2-9-90 DAY Friday SHEET 20

INSPECTOR Shuman

PROGRESS

Review project site, and signed off work permit extension

Contractor Completed setting the outer forms.

Has set up for the water stop & anchor bolts will set there next week.

The excavation & forms have been covered for the weekend. Also site cleaned up & trash removed.

DELAYS none noted

PROBLEMS/RESOLUTIONS

Contractor continues to service temporary generators for air monitors portable.

REMARKS

PE M Freckling called and approved increasing inner wall from 6" to 8" & more steel re-inforcement to clear water-stop (9") in.

MEETING/SUBJECT

Shuman

WEATHER	AM	PM
SUNNY		
CLOUDY		
RAIN		
SNOW		
< 40° F		
40° - 60° F		
60° - 80° F		
> 80° F		

WORK FORCE	NO
------------	----

SUPER	1
-------	---

FOREMAN	1
---------	---

CARPENTER	3
-----------	---

CARPET LAYER	
--------------	--

CEMENT FIN	
------------	--

DRY WALL	
----------	--

ELECTRICIAN	
-------------	--

GLAZER	
--------	--

INSTRUMENT	
------------	--

INSULATOR	
-----------	--

IRON WORKER	
-------------	--

LABORER	
---------	--

MASON	
-------	--

MILLWRIGHT	
------------	--

OPR ENGR	
----------	--

PAINTER	
---------	--

PIPE FITTER	
-------------	--

PLUMBER	
---------	--

ROOFER	
--------	--

SHEET METAL	
-------------	--

TEAMSTER	
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TILE SETTER	
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TOTAL	
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EQUIPMENT	
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AUTHORIZATION OR CONTRACT NO 986147

DATE 2-12-90 DAY Monday SHEET 21 OF 21

INSPECTOR D. L. Luman

PROGRESS

DELAYS

PROBLEMS/RESOLUTIONS

REMARKS

MEETING/SUBJECT

WEATHER	AM	PM
SUNNY		
CLOUDY		
RAIN		
SNOW	X	X
< 40° F		
40° - 60° F		
60° - 80° F		
> 80° F		

WORK FORCE	NO
SUPER	
FOREMAN	
CARPENTER	
CARPET LAYER	
CEMENT FIN	
DRY WALL	
ELECTRICIAN	
GLAZER	
INSTRUMENT	
INSULATOR	
IRON WORKER	
LABORER	
MASON	
MILLWRIGHT	
OPR ENGR	
PAINTER	
PIPE FITTER	
PLUMBER	
ROOFER	
SHEET METAL	
TEAMSTER	
TILE SETTER	

TOTAL	
EQUIPMENT	

AUTHORIZATION OR CONTRACT NO 986147

DATE 2-14 DAY Wednesday SHEET 23 OF 23

INSPECTOR D. L. Lison

PROGRESS

DELAYS

PROBLEMS/RESOLUTIONS

REMARKS

MEETING/SUBJECT

WEATHER	AM	PM
SUNNY		
CLOUDY		
RAIN		
SNOW	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
< 40° F		
40° - 60° F		
60° - 80° F		
> 80° F		

WORK FORCE	NO
SUPER	
FOREMAN	
CARPENTER	
CARPET LAYER	
CEMENT FIN	
DRY WALL	
ELECTRICIAN	
GLAZER	
INSTRUMENT	
INSULATOR	
IRON WORKER	
LABORER	
MASON	
MILLWRIGHT	
OPR ENGR	
PAINTER	
PIPE FITTER	
PLUMBER	
ROOFER	
SHEET METAL	
TEAMSTER	
TILE SETTER	
TOTAL	
EQUIPMENT	

AUTHORIZATION OR CONTRACT NO 986147

DATE 2-15 DAY Thursday SHEET 2

INSPECTOR J. H. H. H.

PROGRESS

DELAYS

PROBLEMS/RESOLUTIONS

REMARKS

MEETING/SUBJECT

WORK FORCE	NO
SUPER	
FOREMAN	
CARPENTER	
CARPET LAYER	
CEMENT FIN	
DRY WALL	
ELECTRICIAN	
GLAZER	
INSTRUMENT	
INSULATOR	
IRON WORKER	
LABORER	
MASON	
MILLWRIGHT	
OPR ENGR	
PAINTER	
PIPE FITTER	
PLUMBER	
ROOFER	
SHEET METAL	
TEAMSTER	
TILE SETTER	
TOTAL	
EQUIPMENT	

MEETING/SUBJECT

WEATHER	AM	PM
SUNNY		
CLOUDY		
RAIN		
SNOW		
< 40° F		
40° - 60° F		
60° - 80° F		
> 80° F		

WORK FORCE	NO
SUPER	1
FOREMAN	1
CARPENTER	3
CARPET LAYER	
CEMENT FIN	
DRY WALL	
ELECTRICIAN	
GLAZER	
INSTRUMENT	
INSULATOR	
IRON WORKER	
LABORER	
MASON	
MILLWRIGHT	
OPR ENGR	
PAINTER	
PIPE FITTER	
PLUMBER	
ROOFER	
SHEET METAL	
TEAMSTER	
TILE SETTER	
TOTAL	
EQUIPMENT	

AUTHORIZATION OR CONTRACT NO 986147
 DATE 2-17-90 DAY Saturday SHEET 2
 INSPECTOR D. L. Luman, ROLL WEST

PROGRESS
water stop

DELAYS

PROBLEMS/RESOLUTIONS

REMARKS

MEETING/SUBJECT

WEATHER	AM	PM
SUNNY		
CLOUDY		
RAIN		
SNOW		
< 40° F		
40° - 60° F		
60° - 80° F		
> 80° F		

WORK FORCE	NO
SUPER	1
FOREMAN	1
CARPENTER	3
CARPET LAYER	
CEMENT FIN	
DRY WALL	
ELECTRICIAN	
GLAZER	
INSTRUMENT	
INSULATOR	
IRON WORKER	
LABORER	1
MASON	
MILLWRIGHT	
OPR ENGR	
PAINTER	
PIPE FITTER	
PLUMBER	
ROOFER	
SHEET METAL	
TEAMSTER	
TILE SETTER	

TOTAL
EQUIPMENT

AUTHORIZATION OR CONTRACT NO 986147

DATE 2-19-80 DAY Monday SHEET 27 OF

INSPECTOR *James H. Finner*

PROGRESS

DELAYS

PROBLEMS/RESOLUTIONS

REMARKS

MEETING/SUBJECT

WEATHER	AM	PM
SUNNY		
CLOUDY		
RAIN		
SNOW		
< 40°F		
40° - 60°F		
60° - 80°F		
> 80°F		

WORK FORCE	NO
SUPER	1
FOREMAN	1
CARPENTER	3
CARPET LAYER	
CEMENT FIN	
DRY WALL	
ELECTRICIAN	
GLAZER	
INSTRUMENT	
INSULATOR	
IRON WORKER	
LABORER	1
MASON	
MILLWRIGHT	
OPR ENGR	
PAINTER	
PIPE FITTER	
PLUMBER	
ROOFER	
SHEET METAL	
TEAMSTER	
TILE SETTER	
TOTAL	
EQUIPMENT	

AUTHORIZATION OR CONTRACT NO 986141

DATE 2-20-80 DAY Tuesday SHEET 2

INSPECTOR J. L. Luman

PROGRESS

Same as Monday

DELAYS

PROBLEMS/RESOLUTIONS

REMARKS

MEETING/SUBJECT

OF

WEATHER	AM	PM
SUNNY		
CLOUDY		
RAIN		
SNOW		
< 40° F		
40° - 60° F		
60° - 80° F		
> 80° F		

WORK FORCE	NO
SUPER	1
FOREMAN	1
CARPENTER	3
CARPET LAYER	
CEMENT FIN	
DRY WALL	
ELECTRICIAN	
GLAZER	
INSTRUMENT	
INSULATOR	
IRON WORKER	
LABORER	1
MASON	
MILLWRIGHT	
OPR ENGR	
PAINTER	
PIPE FITTER	
PLUMBER	
ROOFER	
SHEET METAL	
TEAMSTER	
TILE SETTER	

TOTAL
EQUIPMENT

AUTHORIZATION OR CONTRACT NO 486171

DATE 2-21-90

DAY Wednesday SHEET 29 OF

INSPECTOR D. J. Sullivan

PROGRESS

75 72
3.20
72 52

64748
snow

D

PRC

REMARKS

MEETING/SUBJECT

WEATHER	AM	PM
SUNNY		
CLOUDY		
RAIN		
SNOW		
< 40° F		
40° - 60° F		
60° - 80° F		
> 80° F		

WORK FORCE	NO
SUPER	1
FOREMAN	1
CARPENTER	3
CARPET LAYER	
CEMENT FIN	
DRY WALL	
ELECTRICIAN	
GLAZER	
INSTRUMENT	
INSULATOR	
IRON WORKER	
LABORER	2
MASON	1
MILLWRIGHT	
OPR ENGR	
PAINTER	
PIPE FITTER	
PLUMBER	
ROOFER	
SHEET METAL	
TEAMSTER	
TILE SETTER	
TOTAL	
EQUIPMENT	

AUTHORIZATION OR CONTRACT NO 956/47

DATE 2-22-90 DAY Thursday SHEET 30

INSPECTOR D. Blum

PROGRESS
Placed foundations wall

DELAYS

PROBLEMS/RESOLUTIONS

REMARKS

MEETING/SUBJECT

WEATHER	AM	PM
SUNNY		
CLOUDY		
RAIN		
SNOW		
< 40° F		
40° - 60° F		
60° - 80° F		
> 80° F		

WORK FORCE	NO
SUPER	/
FOREMAN	/
CARPENTER	
CARPET LAYER	
CEMENT FIN	
DRY WALL	
ELECTRICIAN	
GLAZER	
INSTRUMENT	
INSULATOR	
IRON WORKER	
LABORER	2
MASON	
MILLWRIGHT	
OPR ENGR	
PAINTER	
PIPE FITTER	
PLUMBER	
ROOFER	
SHEET METAL	
TEAMSTER	
TILE SETTER	
TOTAL	
EQUIPMENT	

AUTHORIZATION OR CONTRACT NO 986147

DATE 2-23-90 DAY Friday SHEET 31 OF

INSPECTOR *[Signature]*

PROGRESS

DELAYS

PROBLEMS/RESOLUTIONS

REMARKS

MEETING/SUBJECT

WORK FORCE	NO
SUPER	1
FOREMAN	1
CARPENTER	
CARPET LAYER	1
CEMENT FIN	
DRY WALL	
ELECTRICIAN	
GLAZER	
INSTRUMENT	
INSULATOR	
IRON WORKER	
LABORER	2
MASON	
MILLWRIGHT	
OPR ENGR	
PAINTER	
PIPE FITTER	
PLUMBER	
ROOFER	
SHEET METAL	
TEAMSTER	
TILE SETTER	
TOTAL	
EQUIPMENT	

MEETING/SUBJECT

WEATHER	AM	PM
SUNNY		
CLOUDY		
RAIN		
SNOW		
< 40° F		
40° - 60° F		
60° - 80° F		
> 80° F		

WORK FORCE	NO
SUPER	/
FOREMAN	/
CARPENTER	
CARPET LAYER	
CEMENT FIN	
DRY WALL	
ELECTRICIAN	
GLAZER	
INSTRUMENT	
INSULATOR	
IRON WORKER	
LABORER	2
MASON	
MILLWRIGHT	
OPR ENGR	
PAINTER	
PIPE FITTER	
PLUMBER	
ROOFER	
SHEET METAL	
TEAMSTER	
TILE SETTER	
TOTAL	
EQUIPMENT	

AUTHORIZATION OR CONTRACT NO 98614 1

DATE 2-27-90 DAY Tuesday SHEET 33 OF 33

INSPECTOR [Signature]

PROGRESS

Ship

DELAYS

PROBLEMS/RESOLUTIONS

REMARKS

MEETING/SUBJECT

WEATHER	AM	PM
SUNNY		
CLOUDY		
RAIN		
SNOW		
< 40° F		
40° - 60° F		
60° - 80° F		
> 80° F		

WORK FORCE	NO
SUPER	1
FOREMAN	
CARPENTER	
CARPET LAYER	
CEMENT FIN	
DRY WALL	
ELECTRICIAN	
GLAZER	
INSTRUMENT	
INSULATOR	
IRON WORKER	
LABORER	3
MASON	
MILLWRIGHT	
OPR ENGR	2
PAINTER	
PIPE FITTER	
PLUMBER	
ROOFER	
SHEET METAL	
TEAMSTER	
TILE SETTER	
TOTAL	
EQUIPMENT	
Bank bul	
Excavator	

AUTHORIZATION OR CONTRACT NO 986147
DATE 2-28-90 DAY Wednesday SHEET 34
INSPECTOR [Signature]
PROGRESS

DELAYS

PROBLEMS/RESOLUTIONS

REMARKS

MEETING/SUBJECT

Report on loads -

WORK FORCE	NO
SUPER	
FOREMAN	
CARPENTER	
CARPET LAYER	
CEMENT FIN	
DRY WALL	
ELECTRICIAN	
GLAZER	
INSTRUMENT	
INSULATOR	
IRON WORKER	
LABORER	
MASON	
MILLWRIGHT	
OPR ENGR	
PAINTER	
PIPE FITTER	
PLUMBER	
ROOFER	
SHEET METAL	
TEAMSTER	
TILE SETTER	
TOTAL	
EQUIPMENT	

DATE march 1, 1990 DAY Thursday SHEET 35 OF
INSPECTOR O. J. Furman

This image shows a single sheet of white paper with horizontal blue or grey ruling lines, typical of notebook paper. The lines are evenly spaced and run across the width of the page. There is no handwriting or other markings on the paper.

WORK FORCE	NO
SUPER	
FOREMAN	
CARPENTER	
CARPET LAYER	
CEMENT FIN	
DRY WALL	
ELECTRICIAN	
GLAZER	
INSTRUMENT	
INSULATOR	
IRON WORKER	
LABORER	
MASON	
MILLWRIGHT	
OPR ENGR	
PAINTER	
PIPE FITTER	
PLUMBER	
ROOFER	
SHEET METAL	
TEAMSTER	
TILE SETTER	
TOTAL	
EQUIPMENT	

[illegible]

WORK FORCE	NO
SUPER	
FOREMAN	
CARPENTER	
CARPET LAYER	
CEMENT FIN	
DRY WALL	
ELECTRICIAN	
GLAZER	
INSTRUMENT	
INSULATOR	
IRON WORKER	
LABORER	
MASON	
MILLWRIGHT	
OPR ENGR	
PAINTER	
PIPE FITTER	
PLUMBER	
ROOFER	
SHEET METAL	
TEAMSTER	
TILE SETTER	
TOTAL	
EQUIPMENT	

MEETING/SUBJECT _____

DAILY LOST TIME REPORT

AUTHORIZATION NO: 986147

DATE 3-5-90

CONTRACT NO: 58923

JOB TITLE: Hill Side Building 891

CONTRACTOR: Jose GARCIA Const

TIME OF DELAY FROM 7:00 am TO 9:00 am

TOTAL HOURS LOST: 2.5

REASON FOR DELAY

NO WORK PERMIT ON SITE

Note: (could not secure permit due to water seepage into trench. Which had been going on over the weekend. No accumulation of water was noted. Approval to place sand, compact and start backfill to force any accumulation. With ground was only water. Repair by Blahorde & my self. Location was around telephone & power lines in for temporary. Power location

LIST OF MEN AND TRADES DELAYED

PAUL COARRUBIAS	Supt	2 HOURS	Phil COARRUBIAS	FORMAN	2 HOURS
TOMY SAILAS	Carpenter	2 HOURS	HOWARD SMITHGALL	OPERATOR	2 HOURS
JAMES SAILAS	Finisher	2 HOURS	RON SAWYER	DRIVER	2 HOURS
LOUIS GARCIA	FORMAN	2 HOURS	ORLANDO HERRERA	LABOR	2 HOURS
			CHARLES BRANT	ELECT.	1 HOUR

LIST OF EQUIPMENT DELAYED

Back Hoe 2 HOURS
 Dump TRUCK 2 HOURS
 Dump TRUCK 2 HOURS
 Front End loader 2 HOURS
 mequel olivia operator 2 HOURS

The delay described above has been agreed upon by the RI representative and the contractor representative involved.

CONTRACTOR REP: Paul A. Coarrubias DATE 3-5-90

CONST. COORD: [Signature] DATE 3-8-90

PROJECT ADM: _____ DATE _____

DAILY LOST TIME REPORT

DATE March 5, 1990

AUTHORIZATION NO: _____

CONTRACT NO: 58923 JKJOB TITLE: Bldg#891CONTRACTOR: PHIL'S BACK-Hoe Service, Inc. *TIME OF DELAY FROM 7:00 am TO 9:00 am pmTOTAL HOURS LOST: 2 HRS.REASON FOR DELAYPermit to work was not signedTOTAL Cost Downtime \$527.42LIST OF MEN AND TRADES DELAYED

PHIL Covarrubias - Foreman	- 2 hrs. X	\$ 20.15	=	\$ 40.30
Miguel Oliva - Operator	2 hrs. X	\$ 17.28	=	\$ 34.56
Howard Smithgall - Operator	2 hrs. X	\$ 17.28	=	\$ 34.56
Ron Sawyer - Driver	- 2 hrs. X	\$ 19.15	=	\$ 38.30
Omarlo Herrera - Labor	- 2 hrs. X	\$ 12.49	=	\$ 24.98
Howard Smithgall - Driver				\$ 172.70
				58.72
				<u>\$231.42</u>

34% Labor Burden

LIST OF EQUIPMENT DELAYED

2 K.W. Dump TRUCKS	4 hrs. X	\$ 25.00 @hr.	=	\$100.-
3yd. Loader	2 hrs. X	\$ 65.00 @hr.	=	\$130.-
410 BACK-Hoe	2 hrs. X	\$ 33.00 @hr.	=	\$66.00
				<u>\$296.00</u>

The delay described above has been agreed upon by the RI representative and the contractor representative involved.

Bob McCarter

CONTRACTOR REP: _____

DATE 3-5-90

JKE Duran

CONST. COORD: _____

DATE 3-5-90

PROJECT ADM: _____

DATE _____

WEATHER	AM	PM
SUNNY		
CLOUDY		
RAIN		
SNOW		
< 40° F		
40° - 60° F		
60° - 80° F		
> 80° F		

WORK FORCE	NO
SUPER	
FOREMAN	
CARPENTER	
CARPET LAYER	
CEMENT FIN	
DRY WALL	
ELECTRICIAN	
GLAZER	
INSTRUMENT	
INSULATOR	
IRON WORKER	
LABORER	
MASON	
MILLWRIGHT	
OPR ENGR	
PAINTER	
PIPE FITTER	
PLUMBER	
ROOFER	
SHEET METAL	
TEAMSTER	
TILE SETTER	
TOTAL	
EQUIPMENT	

AUTHORIZATION OR CONTRACT NO. 100

DATE March 6, 1990 DAY Tuesday SHEET 38

INSPECTOR Jim

PROGRESS

DELAYS

PROBLEMS/RESOLUTIONS

REMARKS

MEETING/SUBJECT

WORK FORCE	NO
SUPER	
FOREMAN	
CARPENTER	
CARPET LAYER	
CEMENT FIN	
DRY WALL	
ELECTRICIAN	
GLAZER	
INSTRUMENT	
INSULATOR	
IRON WORKER	
LABORER	
MASON	
MILLWRIGHT	
OPR ENGR	
PAINTER	
PIPE FITTER	
PLUMBER	
ROOFER	
SHEET METAL	
TEAMSTER	
TILE SETTER	
TOTAL	
EQUIPMENT	

MEETING/SUBJECT

WORK FORCE	NO
SUPER	
FOREMAN	
CARPENTER	
CARPET LAYER	
CEMENT FIN	
DRY WALL	
ELECTRICIAN	
GLAZER	
INSTRUMENT	
INSULATOR	
IRON WORKER	
LABORER	
MASON	
MILLWRIGHT	
OPR ENGR	
PAINTER	
PIPE FITTER	
PLUMBER	
ROOFER	
SHEET METAL	
TEAMSTER	
TILE SETTER	
TOTAL	
EQUIPMENT	

WORK FORCE	NO
SUPER	
FOREMAN	
CARPENTER	
CARPET LAYER	
CEMENT FIN	
DRY WALL	
ELECTRICIAN	
GLAZER	
INSTRUMENT	
INSULATOR	
IRON WORKER	
LABORER	
MASON	
MILLWRIGHT	
OPR ENGR	
PAINTER	
PIPE FITTER	
PLUMBER	
ROOFER	
SHEET METAL	
TEAMSTER	
TILE SETTER	
TOTAL	
EQUIPMENT	

MEETING/SUBJECT _____

WORK FORCE	NO
SUPER	
FOREMAN	
CARPENTER	
CARPET LAYER	
CEMENT FIN	
DRY WALL	
ELECTRICIAN	
GLAZER	
INSTRUMENT	
INSULATOR	
IRON WORKER	
LABORER	
MASON	
MILLWRIGHT	
OPR ENGR	
PAINTER	
PIPE FITTER	
PLUMBER	
ROOFER	
SHEET METAL	
TEAMSTER	
TILE SETTER	
TOTAL	
EQUIPMENT	

[illegible]

WEATHER	AM/PM	
SUNNY		
CLOUDY		
RAIN		
SNOW		
< 40° F		
40° - 60° F		
60° - 80° F		
> 80° F		

WORK FORCE	NO
SUPER	
FOREMAN	
CARPENTER	
CARPET LAYER	
CEMENT FIN	
DRY WALL	
ELECTRICIAN	
GLAZER	
INSTRUMENT	
INSULATOR	
IRON WORKER	
LABORER	
MASON	
MILLWRIGHT	
OPR ENGR	
PAINTER	
PIPE FITTER	
PLUMBER	
ROOFER	
SHEET METAL	
TEAMSTER	
TILE SETTER	
TOTAL	
EQUIPMENT	

AUTHORIZATION OR CONTRACT NO. _____

DATE 3-15-90 DAY Thursday SHEET 45 OF _____

INSPECTOR [Signature]

PROGRESS

DELAYS

PROBLEMS/RESOLUTIONS

REMARKS

MEETING/SUBJECT

WEATHER	AM	PM
SUNNY		
CLOUDY		
RAIN		
SNOW		
< 40° F		
40° - 60° F		
60° - 80° F		
> 80° F		

WORK FORCE	NO
SUPER	
FOREMAN	
CARPENTER	
CARPET LAYER	
CEMENT FIN	
DRY WALL	
ELECTRICIAN	
GLAZER	
INSTRUMENT	
INSULATOR	
IRON WORKER	
LABORER	
MASON	
MILLWRIGHT	
OPR ENGR	
PAINTER	
PIPE FITTER	
PLUMBER	
ROOFER	
SHEET METAL	
TEAMSTER	
TILE SETTER	
TOTAL	
EQUIPMENT	

AUTHORIZATION OR CONTRACT NO 98647

DATE 3-16-90 DAY FRIDAY SHEET 46

INSPECTOR Shuman

PROGRESS

DELAYS

PROBLEMS/RESOLUTIONS

REMARKS

MEETING/SUBJECT

WORK FORCE	NO
SUPER	
FOREMAN	
CARPENTER	
CARPET LAYER	
CEMENT FIN	
DRY WALL	
ELECTRICIAN	
GLAZER	
INSTRUMENT	
INSULATOR	
IRON WORKER	
LABORER	
MASON	
MILLWRIGHT	
OPR ENGR	
PAINTER	
PIPE FITTER	
PLUMBER	
ROOFER	
SHEET METAL	
TEAMSTER	
TILE SETTER	
TOTAL	
EQUIPMENT	

MEETING/SUBJECT _____

WORK FORCE	NO
SUPER	
FOREMAN	
CARPENTER	
CARPET LAYER	
CEMENT FIN	
DRY WALL	
ELECTRICIAN	
GLAZER	
INSTRUMENT	
INSULATOR	
IRON WORKER	
LABORER	
MASON	
MILLWRIGHT	
OPR ENGR	
PAINTER	
PIPE FITTER	
PLUMBER	
ROOFER	
SHEET METAL	
TEAMSTER	
TILE SETTER	
TOTAL	
EQUIPMENT	

MEETING/SUBJECT

WEATHER	AM	PM
SUNNY		
CLOUDY		
RAIN		
SNOW		
< 40° F		
40° - 60° F		
60° - 80° F		
> 80° F		

WORK FORCE	NO
SUPER	
FOREMAN	
CARPENTER	
CARPET LAYER	
CEMENT FIN	
DRY WALL	
ELECTRICIAN	
GLAZER	
INSTRUMENT	
INSULATOR	
IRON WORKER	
LABORER	
MASON	
MILLWRIGHT	
OPR ENGR	
PAINTER	
PIPE FITTER	
PLUMBER	
ROOFER	
SHEET METAL	
TEAMSTER	
TILE SETTER	
TOTAL	
EQUIPMENT	

AUTHORIZATION OR CONTRACT NO 986147

DATE 3-22-90 DAY Thursday SHEET 52

INSPECTOR Shuman

PROGRESS

DELAYS

PROBLEMS/RESOLUTIONS

REMARKS

MEETING/SUBJECT

WORK FORCE	NO
SUPER	
FOREMAN	
CARPENTER	
CARPET LAYER	
CEMENT FIN	
DRY WALL	
ELECTRICIAN	
GLAZER	
INSTRUMENT	
INSULATOR	
IRON WORKER	
LABORER	
MASON	
MILLWRIGHT	
OPR ENGR	
PAINTER	
PIPE FITTER	
PLUMBER	
ROOFER	
SHEET METAL	
TEAMSTER	
TILE SETTER	
TOTAL	
EQUIPMENT	

MEETING/SUBJECT

WORK FORCE	NO
SUPER	
FOREMAN	
CARPENTER	
CARPET LAYER	
CEMENT FIN	
DRY WALL	
ELECTRICIAN	
GLAZER	
INSTRUMENT	
INSULATOR	
IRON WORKER	
LABORER	
MASON	
MILLWRIGHT	
OPR ENGR	
PAINTER	
PIPE FITTER	
PLUMBER	
ROOFER	
SHEET METAL	
TEAMSTER	
TILE SETTER	
TOTAL	
EQUIPMENT	

MEETING/SUBJECT

DAILY LOST TIME REPORT

DATE 3-26-90

AUTHORIZATION NO: 986147

CONTRACT NO: 58923 JK

JOB TITLE: Hill Side Building 891

CONTRACTOR: JOSE GARCIA CONST.

TIME OF DELAY FROM 8:00 ~~am~~-pm TO 10:00 ~~am~~-pm

TOTAL HOURS LOST: 10 HRS

REASON FOR DELAY

No work permit on site
Job shut down

LIST OF MEN AND TRADES DELAYED

Paul Covarrubias - supt. 4 - HRS
Louis Garcia - foreman 2 - HRS
Tony Sallas - carpenter 2 - HRS
James Sallas - laborer 2 - HRS

LIST OF EQUIPMENT DELAYED

The delay described above has been agreed upon by the RI representative and the contractor representative involved.

CONTRACTOR REP: Paul A. Covarrubias

DATE 3-26-90

CONST. COORD: Jose Garcia

DATE 4-2-90

PROJECT ADM: Wm Brumby

DATE 4-2-90

DAILY LOST TIME REPORT

DATE 3-26-90

AUTHORIZATION NO: _____

CONTRACT NO: 58923 JKJOB TITLE: 891 Hill Side BuildingCONTRACTOR: Phil's Backhoe - Sub ContractorTIME OF DELAY FROM 8:00 ~~am~~-pm TO 10:00 ~~am~~-pmTOTAL HOURS LOST: 12REASON FOR DELAY

NO WORK PERMIT ON SITE
Job Shut Down

LIST OF MEN AND TRADES DELAYED

Phil Couraubins Foreman - 2 HRS
Miguel Oliva Labor - 2 - HRS
Ron Sawyer Labor - 2 - HRS
HARRY Smithgall operator 2 - HRS

LIST OF EQUIPMENT DELAYED

Loader - 2 - HRS
Jumping Jack (Compactor) - 2 - HRS

The delay described above has been agreed upon by the RI representative and the contractor representative involved.

CONTRACTOR REP: Phil A Couraubins DATE 3-26-90CONST. COORD: Daachman DATE 3-26-90PROJECT ADM: Wm Bruminga DATE 4-2-90

DAILY LOST TIME REPORT

DATE 3-26-90

AUTHORIZATION NO: 3#

CONTRACT NO: 58923 JK

JOB TITLE: Hill Side Building 891

CONTRACTOR: C+H Elect - Sub. Contractor

TIME OF DELAY FROM 8:00 am TO 10:00 am

TOTAL HOURS LOST: 2 HRS

REASON FOR DELAY

NO WORK permit on site
Job shut down

LIST OF MEN AND TRADES DELAYED

Foreman - Terry Hale 2 HRS
elect - Charles Brant 2 HRS

LIST OF EQUIPMENT DELAYED

wire pulper - 2 HRS

The delay described above has been agreed upon by the RI representative and the contractor representative involved.

CONTRACTOR REP: Paul A. Comanuco DATE 3-26-90

CONST. COORD: _____ DATE _____

PROJECT ADM: Wm Brumma DATE 4-2-90

WORK FORCE	NO
SUPER	
FOREMAN	
CARPENTER	
CARPET LAYER	
CEMENT FIN	
DRY WALL	
ELECTRICIAN	
GLAZER	
INSTRUMENT	
INSULATOR	
IRON WORKER	
LABORER	
MASON	
MILLWRIGHT	
OPR ENGR	
PAINTER	
PIPE FITTER	
PLUMBER	
ROOFER	
SHEET METAL	
TEAMSTER	
TILE SETTER	
TOTAL	
EQUIPMENT	

MEETING/SUBJECT

DAILY LOST TIME REPORT

DATE 3-27-90AUTHORIZATION NO: 986147CONTRACT NO: 58923 JKJOB TITLE: Hill Side Building 891CONTRACTOR: JOSE GARCIA ConstTIME OF DELAY FROM 7:00 ~~am~~ pm TO 9:00 ~~am~~ pmTOTAL HOURS LOST: 10 HRSREASON FOR DELAY~~NO WORK PERMIT ON SITE~~

Job shut down. Show up Time

Note: Confirmed shut down on Tuesday. JH.

LIST OF MEN AND TRADES DELAYED

Paul Covarrubias	Sup	4 HRS
Louis Garcia	Foreman	2 HRS
Tony Sailas	Carp	2 HRS
James Sailas	Labor/Finisher	2 HRS

LIST OF EQUIPMENT DELAYED

The delay described above has been agreed upon by the RI representative and the contractor representative involved.

CONTRACTOR REP: Paul A Covarrubias DATE 3-27-90CONST. COORD: Donna DATE 3-27-90PROJECT ADM: Wm Bruminga DATE 4-2-90

DAILY LOST TIME REPORT

AUTHORIZATION NO: 986147DATE 3-27-90CONTRACT NO: 58923 JKJOB TITLE: 891 Hill Side BuildingCONTRACTOR: Phil's Backhoe - Sub ContractorTIME OF DELAY FROM 8:00 ~~am~~-pm TO 10:00 ~~am~~-pmTOTAL HOURS LOST: 12REASON FOR DELAY

NO WORK PERMIT ON SITE
Job shut down
Note! Confirmed shut on Tuesday. J.R.

LIST OF MEN AND TRADES DELAYED

Phil COVARRUBINS Foreman - 2 HRS
Miguel OLIVERA Labor - 2 - HRS
Ron SAWYER Labor - 2 - HRS
HARVEY SMITHGALL operator 2 - HRS

LIST OF EQUIPMENT DELAYED

Loader - 2 - HRS
Jumping Jack (Compactor) - 2 - HRS

The delay described above has been agreed upon by the RI representative and the contractor representative involved.

CONTRACTOR REP: Paul H Covarrubias DATE 3-28-90CONST. COORD: David Huan DATE 3-27-90PROJECT ADM: Wm Brumminga DATE 4-2-90

DAILY LOST TIME REPORT

DATE 3-27-90AUTHORIZATION NO: 986147CONTRACT NO: 58923 JKJOB TITLE: Building 891 HillsideCONTRACTOR: José Garcia Const & Sub Contractors Elect.TIME OF DELAY FROM 11:00 ~~am~~ pm TO 2:00 ~~pm~~ am ~~pm~~TOTAL HOURS LOST: 9 HRSREASON FOR DELAY

IKE DURAN Request that C+H come out and
REINSTALL wires at Breaker and get AIR monitor
Back on Line. (Some one tampered with wiring)

Note: Called Back after Shut down due to Elect.
Left as found in an unsafe condition
J.G.

LIST OF MEN AND TRADES DELAYED

Paul Couranubino Supt 4-HRS

Gomez Hale Foreman (Elect) 4-HRS

LIST OF EQUIPMENT DELAYED

The delay described above has been agreed upon by the RI representative and the contractor representative involved.

CONTRACTOR REP: Paul A Couranubino DATE 3-27-90CONST. COORD: Jose Garcia DATE 3-27-90PROJECT ADM: Wm Brumwiga DATE 4-2-90

WEATHER	AM	PM
SUNNY	-	-
CLOUDY		
RAIN		
SNOW		
< 40° F	✓	
40° - 60° F		✓
60° - 80° F		
> 80° F		

WORK FORCE	NO
SUPER	
FOREMAN	
CARPENTER	
CARPET LAYER	
CEMENT FIN	
DRY WALL	
ELECTRICIAN	
GLAZER	
INSTRUMENT	
INSULATOR	
IRON WORKER	
LABORER	
MASON	
MILLWRIGHT	
OPR ENGR	
PAINTER	
PIPE FITTER	
PLUMBER	
ROOFER	
SHEET METAL	
TEAMSTER	
TILE SETTER	
TOTAL	0
EQUIPMENT	
misc Equip on project.	

AUTHORIZATION OR CONTRACT NO 786141
DATE Wednesday DAY 3-28-80 SHEET 54
INSPECTOR D. L. Hume

PROGRESS

No Activity on Onst Proj. by Contractor.

Note: Contacted Hans P. Bernal of Enval Site Monitor
he stated the Site Air Monitor was working
normally. Model Reg. NO# D-1706
I checked it late in the evening & it was
working.

DELAYS

Continued project delay due to work stoppage
issued on this day & request on file.

PROBLEMS/RESOLUTIONS

Forwarded Infor. Cont Notice #7 to R. Russo (Enl. Admin)
Also. Infor. Forwarded to B. Brunninger (P.O.)
Cont. notice 6 & 7. Per tel. Fax. J. Garcia Com
Included fax Copy.

REMARKS

Requested new* Schedule from Jose Garcia Cont. Site
not #1 Revisions!

MEETING/SUBJECT

Daniel Hume

WEATHER	AM	PM
SUNNY	✓	✓
CLOUDY		
RAIN		
SNOW		
< 40° F	✓	
40° - 60° F		✓
60° - 80° F		
> 80° F		

WORK FORCE	NO
SUPER	
FOREMAN	
CARPENTER	
CARPET LAYER	
CEMENT FIN	
DRY WALL	
ELECTRICIAN	
GLAZER	
INSTRUMENT	
INSULATOR	
IRON WORKER	
LABORER	
MASON	
MILLWRIGHT	
OPR ENGR	
PAINTER	
PIPE FITTER	
PLUMBER	
ROOFER	
SHEET METAL	
TEAMSTER	
TILE SETTER	
TOTAL	0
EQUIPMENT	
misc. Equip on project.	

AUTHORIZATION OR CONTRACT NO 480141
DATE 3-29-80 DAY THURSDAY SHEET 55 OF 55
INSPECTOR J. L. Furan

PROGRESS

*no activity on construction project by the contractor
* checked air monitor, and seemed to be operating normal*

DELAYS

Continual project delay due to work stoppage issued this week.

PROBLEMS/RESOLUTIONS

Forwarded Copies (tel Fax) to R. Russo Cont. Admin. of FCD #2 dated 3-21-80.

Forwarded copy to (P.D.) B. Rominger, Re start time Schedule of Project (Sch. of events required by CONTRACTOR with Cont. Notice #6 reference and Weekly summary report.

MEETING/SUBJECT

J. L. Furan

SUNNY	✓	✓
CLOUDY		
RAIN		
SNOW		
< 40°F	✓	
40° - 60°F		✓
60° - 80°F		
> 80°F		

WORK FORCE	NO
SUPER	
FOREMAN	
CARPENTER	
CARPET LAYER	
CEMENT FIN	
DRY WALL	
ELECTRICIAN	
GLAZER	
INSTRUMENT	
INSULATOR	
IRON WORKER	
LABORER	
MASON	
MILLWRIGHT	
OPR ENGR	
PAINTER	
PIPE FITTER	
PLUMBER	
ROOFER	
SHEET METAL	
TEAMSTER	
TILE SETTER	
TOTAL	0
EQUIPMENT	
misc Equip. on project	

DATE 3-30-90 DAY Tuesday SHEET 1

INSPECTOR J. H. Huan

PROGRESS

No activity by Contractor to day on the project.
Note: Checked existing air monitor on site & it was working. J.H.

DELAYS

Continue with work stoppage delay.
per CG&G management.

PROBLEMS/RESOLUTIONS

Last Time Report 3-27-90 Requesting 7 day extension was referred back to Bureau Const. That Type of delays & extension required discussion with the Contract Admin. of this project.

REMARKS

Weekly summary report went out Today. For copy to (PA) B. Cummings.

MEETING/SUBJECT

J. H. Huan

OF

WEATHER	AM	PM
SUNNY	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
CLOUDY	<input type="checkbox"/>	<input type="checkbox"/>
RAIN	<input type="checkbox"/>	<input type="checkbox"/>
SNOW	<input type="checkbox"/>	<input type="checkbox"/>
< 40° F	<input checked="" type="checkbox"/>	<input type="checkbox"/>
40° - 60° F	<input type="checkbox"/>	<input type="checkbox"/>
60° - 80° F	<input type="checkbox"/>	<input checked="" type="checkbox"/>
> 80° F	<input type="checkbox"/>	<input type="checkbox"/>

WORK FORCE	NO
SUPER	1
FOREMAN	
CARPENTER	
CARPET LAYER	
CEMENT FIN	
DRY WALL	
ELECTRICIAN	
GLAZER	
INSTRUMENT	
INSULATOR	
IRON WORKER	
LABORER	
MASON	
MILLWRIGHT	
OPR ENGR	
PAINTER	
PIPE FITTER	
PLUMBER	
ROOFER	
SHEET METAL	
TEAMSTER	
TILE SETTER	
TOTAL	1
EQUIPMENT	
Some miss. equip. on site.	

AUTHORIZATION OR CONTRACT NO 986147

DATE April 2, 1990 DAY Monday SHEET 57 OF 57

INSPECTOR D. Duran

PROGRESS

Went over Bldg Const. Site, Covering is still in place

Contractor Rep. Louis Duran went over project. Checking to see if everything is still in place & site in safe condition.

No. Activity on project today by Contractor. note: checked our monitor unit on site & is working normally. D.D.

*

DELAYS

Continue with work stoppage delays. All sub contractors included.

PROBLEMS/RESOLUTIONS

Called Bill Brannigan, (AS) on status of Project. He stated Wanda Barry was having problems with getting Air Monitors in place with maint. (Env. Mgmt.).

REMARKS Suggested that P&O be issued to the Contractor to assemble units & place them on the site. Which would minimize further delay to re-starting the project.

MEETING/SUBJECT

D. Duran

**Construction Contractor's Safety
Meetings and Pre-Job Checklist**

DATE JAN 11, 1990

PRE-JOB SAFETY CHECK SHEET

JOB Remaind ACTION HILL PHASE I LOCATION WEST OF BLDG 836 OUTSIDE
OF POWER LINE

CONTR. NUMBER 58923 JK CONTRACTOR JOSE GARCIA CONST.

CONCRETE WALLS / PTD

- | | |
|---|---|
| 1. Standard Emergency signals fully understood: | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| 2. Contractor responsibility in time of emergency understood? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| 3. Fire and ambulance telephone numbers known? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| 4. Areas for possible evacuation designated? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| 5. Fire protection requirements known and plans made for provision of adequate equipment? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| 6. Special safety rules and signals for this area known? Rockwell will provide printed special rules where available. | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| 7. Nature of chemical or special hazards for area reviewed with User Representative? | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A |
| 8. Special safety equipment for this area known? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| 9. Safety Showers and Eye Wash locations known? | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A |
| 10. Name of person issuing Safe Work Permit | <u>J. DURAN</u> |
| 11. Safe work permit understood? (Designated place to obtain known?) | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| 12. Lockout and Danger Tag rules understood? | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A |
| 13. Smoking area designated? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| 14. Contractor scaffold and ladder rules known? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| 15. Do you have a copy of and understand the Supplemental Safety and Health Manual for Construction Contractors? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| 16. Contractor assumes responsibility for their Vendors entering plant? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| 17. Are your Subcontractors aware of above rules and procedures? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |

REMARKS (Explain all No answers) NO POWER INVOLVED ITEM 12, 9, 7 NO REQUIREMENTS KNOWN.

Jose Garcia
Contractor Representative

1/11/90
Date

Subcontractor

Date

James Huan
Project Coordinator

1-11-90
Date

Subcontractor

Date

REPRER for TCG
User Representative

1-11-90
Date

Subcontractor

Date

DR Sweet (Did not attend meeting) 1-11-90
Rockwell Safety Representative

Date

Subcontractor

Date

DATE March 13, 1990

PRE-JOB SAFETY CHECK SHEET

JOB Remedial Action Hill LOCATION West of Bldg 881 Outside
Phase I of Fence Line
 CONTR. NUMBER 58923 JK CONTRACTOR Jose Garcia Const.
Concrete Walls/Floor Containment Pad/Temporary Const. Elect.

1. Standard Emergency signals fully understood: Yes X No
2. Contractor responsibility in time of emergency understood? Yes X No
3. Fire and ambulance telephone numbers known? Yes X No
4. Areas for possible evacuation designated? Yes X No
5. Fire protection requirements known and plans made for provision of adequate equipment? Yes X No
6. Special safety rules and signals for this area known? Yes X No
 EGIG Reelwell will provide printed special rules where available.
7. Nature of chemical or special hazards for area reviewed with User Representative? Yes X No
8. Special safety equipment for this area known? Yes X No
9. Safety Showers and Eye Wash locations known? Yes X No
10. Name of person issuing Safe Work Permit I. Duran
11. Safe work permit understood? (Designated place to obtain known?) Yes X No
12. Lockout and Danger Tag rules understood? Yes X No
13. Smoking area designated? Yes X No
14. Contractor scaffold and ladder rules known? Yes X No
15. Do you have a copy of and understand the Supplemental Safety and Health Manual for Construction Contractors? Yes X No
16. Contractor assumes responsibility for their Vendors entering plant? Yes X No
17. Are your Subcontractors aware of above rules and procedures? Yes X No

REMARKS. (Explain all No answers)

<u>Paul A. Canubio</u>	<u>3-13-90</u>	Subcontractor	Date
Contractor Representative	Date		
<u>Joseph M. ...</u>	<u>3-13-90</u>	Subcontractor	Date
Project Coordinator	Date		
<u>Wm. Brumina</u>	<u>3-13-90</u>	Subcontractor	Date
User Representative	Date		
<u>Ray F. ...</u>	<u>3-19-90</u>	Subcontractor	Date
Safety Representative	Date		

EGIG

SAFETY meeting

1-29-90

JOSE GARCIA Civil

Paul Courruchin's

Tony SAILAS

JAMES SAILAS

1. HARD HAT AT ALL TIMES
2. STEEL TOES when Running, jumping JACK
3. Protective Clothes, gloves
4. SAFETY glasses when using saw, driving Nails
wind blowing
5. KEEP AREA Clean
6. Watch out for Heavy equip.
7. Watch for Nails Bend or pick up
8. Check Elec Cords for ground and cuts.
9. NO OPEN FLAMES on site.
- 10 NO SMOKING on site

SAFETY meeting 2-15-41

JOSE GARCIA CONST
PAUL COVAREUBINS
LOUIS GARCIA
TONY SAILAS
TERRY SNYDER

C and H Elec.
RED

1. SAFETY GLASSES
2. PULL OR BEND NAILS
3. PLASTIC CAPS ON EXPOSED NAILS OR STAKES
4. USE LADDERS TO CLIMB OVER FENCES
5. BEND TIE WIRE ENDS IN 1" INSIDE
6. KEEP WORK AREA CLEAN
7. HARD HATS
8. WEAR GLOVES
9. CHECK ALL CORDS ON TOOLS AND CORDS
10. LET ENGINE COOL BEFORE FUELING
12. REPORT ALL INJURY.
13. TRANSPORT INJURED IN COMPANY TRUCKS ONLY
1. NO OPEN FLAME ON V/C

SAFETY MEETING

2-12-90

JOSE GARCIA Const
PAUL COVARRUBIAS
LOUIS GARCIA
TONY SAILAS
JAMES SAILAS

1. SAFETY GLASSES
2. Pull OR Bend Nails
3. Plastic Caps ON Exposed REBAR or steel pins
4. Bend Tie wire ends to the inside
5. Keep work area clean
6. HARD HATS
7. WEAR GLOVES
8. Check ALL Cords on Tools and Elect. Cords
9. Let Engine Cool before Fueling
10. Report all injuries
11. Transport injured in Company Trucks only
12. NO OPEN FLAME on Site
13. Look out for wet Blankets or plastic.
14. Keep Ramp Clean.
15. CARE when using welding Iron

SAFETY meeting
Jose Garcia Const
Hillside Building 891

2-19-90

Paul Covarrubias
Tony SAILAS
James SAILAS
Chuck SILVA

1. SAFETY GLASSES
2. PULL OR BEND NAILS
3. Plastic CAPS ON EXPOSED REBAR OR STEEL PINS
4. Bend Tie wire ends to inside
5. Keep work AREA CLEAN
6. HARD HATS
7. Wear gloves
8. Check all Cords on TOOLS AND ELEC. Cords
9. Let engine COOL before FUELING
10. REPORT ALL INJURIES
11. TRANSPORT INJURED IN COMPANY TRUCK ONLY.
12. CALL 911 FOR EMERGENCY FIRE INJURY SECURITY
13. NO OPEN flame on site without fire permit
14. Footing on wet BLANKETS OR PLASTIC
15. Keep WALKWAY clean

16. use CARE when using welding IRON to
water stop.

17. when crossing Road with Hot Cord, protect
with 2x4's

18.

SAFETY MEETING

2-27-90

JOSE GARCIA Const
PAUL COVARRUBIAS
TONY SAILAS
JAMES SAILAS
LOUIS GARCIA

1. HARD HATS AT ALL TIMES

2. Pull or Band Nails

3. clean up.

4. wear GLOVES

5. check ALL CORDS on TOOLS And EXT CORDS

6. Report ALL INJURIES

7. CALL 2911 for Emergency, FIRE INJURY SECURITY.

8. TRANSPORT INJURED in company truck only.

9. Footing on wet Blankets or PLASTIC

10. when crossing Road with Elect. Cord protect with 2x4's.

11. Help with lumber when loading And unloading

12. Watch Footing on loose Rocks, while stripping.



JOSE GARCIA

CONSTRUCTION INC.

General Contractors

Jose (Joe) Garcia
President

2963 West 91st Place
Denver, CO 80221

(303) 429-3209

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MONTHLY FIRE EXTINGUISHER INSPECTION CHECKLIST

	Yes	No
1. Is date of manufacturer or last hydrostatic test date stamped on shell?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Is extinguisher due for hydrostatic test? (Carbon dioxide every five years, dry chemical and halon every 12 years)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3. Is shell free of corrosion or mechanical damage and paint in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4. Is hanger attachment and carrying handle intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5. Is the nameplate firmly attached with no sign of corrosion under the nameplate and is it readable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6. Is the discharge horn or nozzle free of cracks and damage?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
7. Are hose assemblies free of wear cuts, or cracks?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8. Are nozzle openings free of obstructions?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
9. On extinguishers with pressure gauges, is the gauge readable and the crystal intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
10. Is the pressure in the correct range?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
11. Are the lock pin and seal in place?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
12. On wheeled extinguishers, do the wheels turn freely?	<input type="checkbox"/> N/A	<input type="checkbox"/>
13. Is the nitrogen pressure regulator free of corrosion and damage on wheeled extinguishers?	<input type="checkbox"/> N/A	<input type="checkbox"/>

INSPECTOR

Paul A. Covarrubias

DATE

2-27-90



General Contractors

Jose (Joe) Garcia
President

2963 West 91st Place
Denver, CO 80221

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CONSTRUCTION ENGINEERING SAFETY CHECKLIST

CONTRACTOR JOSE GARCIA Const INSPECTED BY Paul Covarrubias
LOCATION Building 891 DATE 2-
Rocky Flats

	ACCEPTABLE	DEFICIENCIES NOTED (LIST)	DEFICIENCIES CORRECTED (DATE)
A. RECORDKEEPING, NOTICES, POSTERS			
1. OSHA Poster GPO-892-171 posted on-site	<input type="checkbox"/>		
2. Emergency telephone numbers posted (ambulances, doctors, hospitals, fire departments)	<input type="checkbox"/>		
3. OSHA Forms 101 and 200 maintained (or name and telephone number posted of person to contact at the central office for information on safety/health data on these two forms)	<input type="checkbox"/>		
4. "Crane Signals" poster displayed	<input type="checkbox"/>		
5. Hazardous chemical inventory on file and up-to-date	<input type="checkbox"/>		
6. MSDS file maintained	<input type="checkbox"/>		
7. Documentation Log of Federal Right-to-Know Training Attendance maintained	<input type="checkbox"/>		
8. Container labels displayed (Air Products temporary labels)	<input type="checkbox"/>		
9. Hazard Definition Poster displayed	<input type="checkbox"/>		
10. MSDS Poster displayed	<input type="checkbox"/>		
11. NFPA Hazard Identification System Poster displayed	<input type="checkbox"/>		
12. Federal Right-to-Know Training Booklets distributed	<input type="checkbox"/>		
13. Controlled Substance Testing Documents Up-To-Date	<input type="checkbox"/>		
B. FIRST AID AND MEDICAL SERVICES			
1. First aid kits accessible	<input checked="" type="checkbox"/>		
2. Telephone numbers posted for doctors, hospitals and ambulances	<input checked="" type="checkbox"/>		
3. Anyone on project first aid- and CPR-qualified	<input type="checkbox"/>		



General Contractors

Jose (Joe) Garcia
President

2963 West 91st Place
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	ACCEPTABLE	DEFICIENCIES NOTED (LIST)	DEFICIENCIES CORRECTED (DATE)
3. Operated by properly trained employees	✓		
4. Defective tools or equipment removed	✓		
5. Equipped with guards	✓		
H. WELDING, GRINDING, AND CUTTING			
1. Gas cylinders stored and anchored correctly	N/A		
2. Valve caps in place	N/A		
3. Performed in safe area free from fire hazards	N/A		
4. Hoses in good condition	N/A		
5. Hard hats being worn under weldmets and face shields	N/A		
6. Gas cylinders in a bottle cart while in use	N/A		
7. Long-sleeved shirts and gloves	N/A		
I. LADDERS AND SCAFFOLDS			
1. Ladders:			
a. Broken rungs or cleats			
b. Properly constructed	✓		
c. Portable ladders anchored correctly			
d. Pitch less than 1:4			
2. Scaffolding:			
a. Correctly anchored	N/A		
b. Guard rails and toeboards	N/A		
c. Proper flooring	N/A		
d. Flooring secured to scaffold structure	N/A		
J. BARRICADES			
1. 42" high	✓		
2. 4' back from edge of opening	✓		
K. ELECTRICAL			
1. All electrical equipment grounded including portable hand tools (not double-insulated) and extension cords	✓		



CONSTRUCTION SPECIFICATIONS

SECTION: 700
 APPENDIX: 1
 DATE: August 1989
 PAGE: 4 of 5

TITLE

SAFETY AND CONSTRUCTION PROCEDURES

	ACCEPTABLE	DEFICIENCIES NOTED (LIST)	DEFICIENCIES CORRECTED (DATE)
2. Ground fault circuit interrupters or assured equipment grounding program provided for electrical wiring cords and equipment	✓		
3. Temporary wiring safe	N/A		
L. TRENCHING AND EXCAVATION			
1. All trenches shored or sloped as required	✓		
2. Properly barricaded or flagged	✓		
M. CRANES AND EQUIPMENT			
1. Rated load capacities posted on equipment	✓		
2. Correct hand signals used	✓		
3. Competent inspection of machinery prior to and during usage	✓		
4. Fire extinguisher in cab of equipment			
5. Swing radius of crane body barricaded	N/A		
6. Tag lines being used on all lifts	N/A		
7. Area below lift barricaded	N/A		
8. Backup warning devices	✓		
9. Is the operation clear of nearby power lines	✓		
N. STEEL ERECTION			
1. At least two bolts at each connection before releasing the load	N/A		
O. SAFETY BELTS			
1. Safety belts worn for elevated work	N/A		
2. Worker securing safety belt line whenever possible	N/A		
P. ROLLOVER PROTECTIVE STRUCTURES			
1. Machines equipped	✓		
2. Installed properly	✓		

Safety meeting

3-12-90

Jose Garcia Const.

Phil BACK HILL

CT & H Elec.

- 1 Hand HATS
- 2 Pull or Bend Nails
- 3 Clean up work AREA
- 4 Footing (look out for loose stones and watch step on wet blankets and plastic)
- 5 Report ALL INJURY
- 6 Barricade ALL OPEN TRENCHES Elec. and plumbing.
7. Safety GLASS
8. Check BACK up ALARM
9. USE CATTENS in TRENCH.
- 10 Check ALL Cords on tools and Elec. Cords.
- 11 Protect Cords when Crossing Road.
12. Wear gloves.
13. Plaster caps on exposed REBAR and stakes.
14. Pull or Bend Nails.



JOSE GARCIA

CONSTRUCTION INC.

General Contractors

Jose (Joe) Garcia
President

2963 West 91st Place
Denver, CO 80221

(303) 429-3209

An Equal Opportunity Employer

MONTHLY FIRE EXTINGUISHER INSPECTION CHECKLIST

	Yes	
1 Is date of manufacturer or last hydrostatic test date stamped on shell?	<input checked="" type="checkbox"/>	—
2 Is extinguisher due for hydrostatic retest? (Carbon dioxide every five years dry chemical and halon every 12 years)	<input checked="" type="checkbox"/>	—
3 Is shell free of corrosion or mechanical damage and paint in good condition?	<input checked="" type="checkbox"/>	—
4 Is hanger attachment and carrying handle intact?	<input type="checkbox"/>	—
5 Is the nameplate firmly attached with no sign of corrosion under the nameplate and is it readable?	<input checked="" type="checkbox"/>	—
6 Is the discharge horn or nozzle free of cracks and damage?	<input checked="" type="checkbox"/>	—
7 Are hose assemblies free of wear, cuts or cracks?	<input checked="" type="checkbox"/>	—
8 Are nozzle openings free of obstructions?	<input checked="" type="checkbox"/>	—
9 On extinguishers with pressure gauges, is the gauge readable and the crystal intact?	<input checked="" type="checkbox"/>	—
10 Is the pressure in the correct range?	<input type="checkbox"/>	—
11 Are the lock pin and seal in place?	<input checked="" type="checkbox"/>	—
12 On wheeled extinguishers, do the wheels turn freely?	<input checked="" type="checkbox"/>	—
13 Is the nitrogen pressure regulator free of corrosion and damage on wheeled extinguishers?	<input checked="" type="checkbox"/>	—

INSPECTOR

Paul A. Conover

DATE 3-12-98



JOSE GARCIA
CONSTRUCTION INC.

General Contractors

Jose (Joe) Garcia
President

2963 West 91st Place
Denver, CO 80221

(303) 429 3209

An Equal Opportunity Employer

CONSTRUCTION ENGINEERING SAFETY CHECKLIST

CONTRACTOR _____ INSPECTED BY _____

LOCATION _____ DATE _____

	ACCEPTABLE	DEFICIENCIES NOTED (LIST)	DEFICIENCIES CORRECTED (DATE)
A. RECORDKEEPING, NOTICES, POSTERS			
1 OSHA Poster GPO-892-171 posted on-site	_____	_____	_____
2 Emergency telephone numbers posted (ambulances, doctors, hospitals, fire departments)	_____	_____	_____
3 OSHA Forms 101 and 200 maintained (or name and telephone number posted of person to contact at the central office for information on safety/ health data on these two forms)	_____	_____	_____
4 "Crane Signals" poster displayed	_____	_____	_____
5 Hazardous chemical inventory on file and up-to-date	_____	_____	_____
6 MSDS file maintained	_____	_____	_____
7 Documentation Log of Federal Right-to-Know Training Attendance maintained	_____	_____	_____
8 Container labels displayed (Air Products temporary labels)	_____	_____	_____
9 Hazard Definition Poster displayed	_____	_____	_____
10 MSDS Poster displayed	_____	_____	_____
11 NFPA Hazard Identification System Poster displayed	_____	_____	_____
12 Federal Right-to-Know Training Booklets distributed	_____	_____	_____
13 Controlled Substance Testing Documents Up-To-Date	_____	_____	_____
B. FIRST AID AND MEDICAL SERVICES			
1 First aid kits accessible	✓	_____	_____
2 Telephone numbers posted for doctors, hospitals and ambulances	✓	_____	_____
3 Anyone on project first aid- and CPR-qualified	_____	_____	_____



General Contractors

Jose (Joe) Garcia
President

2963 West 91st Place
Denver, CO 80221

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	ACCEPTABLE	DEFICIENCIES NOTED (LIST)	DEFICIENCIES CORRECTED (DATE)
3. Operated by properly trained employees	✓		
4. Defective tools or equipment removed	✓		
5. Equipped with guards	✓		
H. WELDING, GRINDING, AND CUTTING			
1. Gas cylinders stored and anchored correctly	N/A		
2. Valve caps in place			
3. Performed in safe area free from fire hazards			
4. Hoses in good condition			
5. Hard hats being worn under weldmets and face shields			
6. Gas cylinders in a bottle cart while in use			
7. Long-sleeved shirts and gloves			
I. LADDERS AND SCAFFOLDS			
1. Ladders:			
a. Broken rungs or cleats	✓		
b. Properly constructed			
c. Portable ladders anchored correctly			
d. Pitch less than 1 4			
2. Scaffolding:			
a. Correctly anchored	N/A		
b. Guard rails and toeboards			
c. Proper flooring			
d. Flooring secured to scaffold structure			
J. BARRICADES			
1. 42" high	✓		
2. 4' back from edge of opening	✓		
K. ELECTRICAL			
1. All electrical equipment grounded including portable hand tools (not double-insulated) and extension cords	✓		



General Contractors

Jose (Joe) Garcia
President

2963 West 91st Place
Denver, CO 80221

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TITLE		SAFETY AND CONSTRUCTION PROCEDURES	
	ACCEPTABLE	DEFICIENCIES NOTED (LIST)	DEFICIENCIES CORRECTED (DATE)
2. Ground fault circuit interrupters or assured equipment grounding program provided for electrical wiring cords and equipment	✓		
3. Temporary wiring safe	N/A		
L. TRENCHING AND EXCAVATION			
1. All trenches shored or sloped as required	✓		
2. Properly barricaded or flagged	✓		
M. CRANES AND EQUIPMENT			
1. Rated load capacities posted on equipment	✓		
2. Correct hand signals used	✓		
3. Competent inspection of machinery prior to and during usage	✓		
4. Fire extinguisher in cab of equipment			
5. Swing radius of crane body barricaded	N/A		
6. Tag lines being used on all lifts	N/A		
7. Area below lift barricaded	N/A		
8. Backup warning devices	✓		
9. Is the operation clear of nearby power lines	✓		
N. STEEL ERECTION			
1. At least two bolts at each connection before releasing the load	N/A		
O. SAFETY BELTS			
1. Safety belts worn for elevated work	N/A		
2. Worker securing safety belt line whenever possible			
P. ROLLOVER PROTECTIVE STRUCTURES			
1. Machines equipped	✓		
2. Used properly	✓		

3-12-90

SAFETY MEETING

3-19-90

JOSE GARCIA Const

PAUL COVARRUBIAS

LOUIS GARCIA

TONY SAILAS

JAMES SAILAS

1. SAFETY GLASSES

2. PULL OR BEND NAILS

3. PLASTIC CAPS ON EXPOSED REBAR OR STEEL PINS

4. BEND TIE WIRE ENDS TO THE INSIDE

5. KEEP WORK AREA CLEAN

6. HARD HATS

7. WEAR GLOVES

8. CHECK ALL CORDS ON TOOLS AND ELECT. CORDS

9. LET ENGINE COOL BEFORE FUELING

10. REPORT ALL INJURYS

11. TRANSPORT INJURED IN COMPANY TRUCKS ONLY.

12. NO OPEN FLAME ON SITE.

13. LOOK OUT FOR WET BLANKETS OR PLASTIC.

14. KEEP RAMP CLEAN.

15. CARE WHEN USING WELDING TROUS



JOSE GARCIA

CONSTRUCTION INC.

General Contractors

Jose (Joe) Garcia
President

2963 West 91st Place
Denver, CO 80221

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MONTHLY FIRE EXTINGUISHER INSPECTION CHECKLIST

- | | <u>Yes</u> |
|--|------------|
| 1 Is date of manufacturer or last hydrostatic test date stamped on shell? | <u>✓</u> |
| 2 Is extinguisher due for hydrostatic test? (Carbon dioxide every five years, dry chemical and halon every 12 years) | <u>✓</u> |
| 3 Is shell free of corrosion or mechanical damage and paint in good condition? | <u>✓</u> |
| 4 Is hanger attachment and carrying handle intact? | <u>✓</u> |
| 5 Is the nameplate firmly attached with no sign of corrosion under the nameplate and is it readable? | <u>✓</u> |
| 6 Is the discharge horn or nozzle free of cracks and damage? | <u>✓</u> |
| 7 Are hose assemblies free of wear cuts, or cracks? | <u>✓</u> |
| 8 Are nozzle openings free of obstructions? | <u>✓</u> |
| 9 On extinguishers with pressure gauges, is the gauge readable and the crystal intact? | <u>✓</u> |
| 10 Is the pressure in the correct range? | <u>✓</u> |
| 11 Are the lock pin and seal in place? | <u>✓</u> |
| 12 On wheeled extinguishers, do the wheels turn freely? | <u>N/A</u> |
| 13 Is the nitrogen pressure regulator free of corrosion and damage on wheeled extinguishers? | <u>✓</u> |

INSPECTOR

Gael H. Covarubien

DATE 3-19-92



JOSE GARCIA

CONSTRUCTION INC.

General Contractors

Jose (Joe) Garcia
President

2963 West 91st Place
Denver, CO 80221

(303) 429 3209

An Equal Opportunity Employer

CONSTRUCTION ENGINEERING SAFETY CHECKLIST

CONTRACTOR _____ INSPECTED BY _____
LOCATION _____ DATE _____

	ACCEPTABLE	DEFICIENCIES NOTED (LIST)	DEFICIENCIES CORRECTED (DATE)
A. RECORDKEEPING, NOTICES, POSTERS			
1. OSHA Poster GPO-892-171 posted on-site	_____	_____	_____
2. Emergency telephone numbers posted (ambulances, doctors, hospitals, fire departments)	_____	_____	_____
3. OSHA Forms 101 and 200 maintained (or name and telephone number posted of person to contact at the central office for information on safety/ health data on these two forms	_____	_____	_____
4. "Crane Signals" poster displayed	_____	_____	_____
5. Hazardous chemical inventory on file and up-to-date	_____	_____	_____
6. MSDS file maintained	_____	_____	_____
7. Documentation Log of Federal Right-to-Know Training Attendance maintained	_____	_____	_____
8. Container labels displayed (Air Products temporary labels)	_____	_____	_____
9. Hazard Definition Poster displayed	_____	_____	_____
10. MSDS Poster displayed	_____	_____	_____
11. NFPA Hazard Identification System Poster displayed	_____	_____	_____
12. Federal Right-to-Know Training Booklets distributed	_____	_____	_____
13. Controlled Substance Testing Documents Up-To-Date	_____	_____	_____
B. FIRST AID AND MEDICAL SERVICES			
1. First aid kits accessible	_____ ✓	_____	_____
2. Telephone numbers posted for doctors, hospitals, and ambulances	_____ ✓	_____	_____
3. Anyone on project first aid and CPR-qualified	_____	_____	_____



Jose (Joe) Garcia
President

2963 West 91st Place
Denver, CO 80221

(303) 429-3209

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	ACCEPTABLE	DEFICIENCIES NOTED (LIST)	DEFICIENCIES CORRECTED (DATE)
3 Operated by properly trained employees	✓		
4 Defective tools or equipment removed	✓		
5. Equipped with guards	✓		
H. WELDING, GRINDING, AND CUTTING			
1 Gas cylinders stored and anchored correctly			
2. Valve caps in place			
3 Performed in safe area free from fire hazards			
4 Hoses in good condition			
5. Hard hats being worn under weldmets and face shields			
6 Gas cylinders in a bottle cart while in use			
7 Long-sleeved shirts and gloves			
I. LADDERS AND SCAFFOLDS			
1. Ladders:			
a. Broken rungs or cleats			
b Properly constructed	✓		
c. Portable ladders anchored correctly			
d Pitch less than 1 4			
2. Scaffolding:			
a. Correctly anchored			
b Guard rails and toeboards			
c. Proper flooring			
d. Flooring secured to scaffold structure			
J. BARRICADES			
1 42" high	✓		
2. 4' back from edge of opening	✓		
K. ELECTRICAL			
1 All electrical equipment grounded including portable hand tools (not double-insulated) and extension cords	✓		



General Contractors

Jose (Joe) Garcia
President

2963 West 91st Place
Denver, CO 80221

(303) 429-3209

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TITLE		SAFETY AND CONSTRUCTION PROCEDURES	
	ACCEPTABLE	DEFICIENCIES NOTED (LIST)	DEFICIENCIES CORRECTED (DATE)
2. Ground fault circuit interrupters or assured equipment grounding program provided for electrical wiring cords and equipment	✓		
3. Temporary wiring safe	N/A		
L. TRENCHING AND EXCAVATION			
1. All trenches shored or sloped as required	✓		
2. Properly barricaded or flagged	✓		
M. CRANES AND EQUIPMENT			
1. Rated load capacities posted on equipment	✓		
2. Correct hand signals used	✓		
3. Competent inspection of machinery prior to and during usage	✓		
4. Fire extinguisher in cab of equipment	✓		
5. Swing radius of crane body barricaded	N/A		
6. Tag lines being used on all lifts	N/A		
7. Area below lift barricaded	N/A		
8. Backup warning devices		not working	
9. Is the operation clear of nearby power lines	✓		
N. STEEL ERECTION			
1. At least two bolts at each connection before releasing the load	N/A		
O. SAFETY BELTS			
1. Safety belts worn for elevated work	N/A		
2. Worker securing safety belt line whenever possible			
P. ROLLOVER PROTECTIVE STRUCTURES			
1. Machines equipped	✓		
2. Labeled properly	✓		



JOSE GARCIA

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	<u>ACCEPTABLE</u>	<u>DEFICIENCIES NOTED (LIST)</u>	<u>DEFICIENCIES CORRECTED (DATE)</u>
Q. PERSONNEL OBSERVING SAFE WORK PRACTICES	_____	_____	_____

REMARKS _____

NOTE: CHECK OSHA REGULATIONS FOR DETAILED REQUIREMENTS APPLICABLE FOR EACH CATEGORY LISTED.

INSPECTOR _____ **DATE** _____

Safety Meeting

3-26-90

Jose Garcia Const.

Phil Backhoe SOB

Cat Elet

1. Hard Hats
2. Pull or Bend Nails
3. Keep work AREA clean
4. Footing inside building on REBAR MATS
5. Bend Tie wire ends.
6. SAFETY glasses when bending REBAR or DRIVING pins
7. Report ALL Injuries.
8. Check ALL Cords on tools and Elect. Cords
9. Protect Cords when crossing Road
10. Caps on exposed REBAR or steel stakes
11. Wear gloves
12. Steel Toes when running jumping etc
13. Watch out for Heavy Equip.
14. CALL 2911 for Emergency (FIRE, INJURY, SECURITY)
15. Transport injured in Company Truck only



General Contractors

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President

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MONTHLY FIRE EXTINGUISHER INSPECTION CHECKLIST

	<u>Yes</u>	<u>No</u>
1 Is date of manufacturer or last hydrostatic test date stamped on shell?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2 Is extinguisher due for hydrostatic retest? (Carbon dioxide every five years dry chemical and halon every 12 years)	<input type="checkbox"/>	<input type="checkbox"/>
3 Is shell free of corrosion or mechanical damage and paint in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4 Is hanger attachment and carrying handle intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5 Is the nameplate firmly attached with no sign of corrosion under the nameplate and is it readable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6 Is the discharge horn or nozzle free of cracks and damage?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7 Are hose assemblies free of wear cuts or cracks?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8 Are nozzle openings free of obstructions?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
9 On extinguishers with pressure gauges, is the gauge readable and the crystal intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
10 Is the pressure in the correct range?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
11 Are the lock pin and seal in place?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
12 On wheeled extinguishers, do the wheels turn freely?	<input type="checkbox"/>	<u>N/A</u>
13 Is the nitrogen pressure regulator free of corrosion and damage on wheeled extinguishers?	<input type="checkbox"/>	<u>N/A</u>

INSPECTOR

Paul A. Coranubis

DATE

3-26-91



JOSE GARCIA

CONSTRUCTION INC.

General Contractors

Jose (Joe) Garcia
President

2963 West 91st Place
Denver, CO 80221

(303) 429-3209

An Equal Opportunity Employer

CONSTRUCTION ENGINEERING SAFETY CHECKLIST

CONTRACTOR Jose Garcia Const INSPECTED BY Paul A. Covamberg
LOCATION Building 691 DATE 3-26-90

	ACCEPTABLE	DEFICIENCIES NOTED (LIST)	DEFICIENCIES CORRECTED (DATE)
A. RECORDKEEPING, NOTICES, POSTERS			
1 OSHA Poster GPO-892-171 posted on-site			
2 Emergency telephone numbers posted (ambulances, doctors, hospitals, fire departments)			
3 OSHA Forms 101 and 200 maintained (or name and telephone number posted of person to contact at the central office for information on safety/health data on these two forms)			
4 "Crane Signals" poster displayed			
5 Hazardous chemical inventory on file and up-to-date			
6 MSDS file maintained			
7 Documentation Log of Federal Right-to-Know Training Attendance maintained			
8 Container labels displayed (Air Products temporary labels)			
9 Hazard Definition Poster displayed			
10 MSDS Poster displayed			
11 NFPA Hazard Identification System Poster displayed			
12 Federal Right-to-Know Training Booklets distributed			
13 Controlled Substance Testing Documents Up-To-Date			
B. FIRST AID AND MEDICAL SERVICES			
1 First aid kits accessible	✓		
2 Telephone numbers posted for doctors hospitals and ambulances	✓		
3 Anyone on project first aid and CPR-qualified	✓		



JOSE GARCIA

CONSTRUCTION INC.

General Contractors

Jose (Joe) Garcia
President

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	ACCEPTABLE	DEFICIENCIES NOTED (LIST)	DEFICIENCIES CORRECTED (DATE)
3. Operated by properly trained employees	✓		
4. Defective tools or equipment removed	✓		
5. Equipped with guards	✓		
H. WELDING, GRINDING, AND CUTTING			
1. Gas cylinders stored and anchored correctly			
2. Valve caps in place			
3. Performed in safe area free from fire hazards			
4. Hoses in good condition			
5. Hard hats being worn under weldmets and face shields			
6. Gas cylinders in a bottle cart while in use			
7. Long-sleeved shirts and gloves			
I. LADDERS AND SCAFFOLDS			
1. Ladders:			
a. Broken rungs or cleats			
b. Properly constructed			
c. Portable ladders anchored correctly			
d. Pitch less than 1 4			
2. Scaffolding:			
a. Correctly anchored			
b. Guard rails and toeboards			
c. Proper flooring			
d. Flooring secured to scaffold structure			
J. BARRICADES			
1. 42" high	✓		
2. 4' back from edge of opening	✓		
K. ELECTRICAL			
1. All electrical equipment grounded including portable hand tools (not double-insulated) and extension cords	✓		



JOSE GARCIA

CONSTRUCTION INC.

General Contractors

Jose (Joe) Garcia
President

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TITLE	SAFETY AND CONSTRUCTION PROCEDURES		
	ACCEPTABLE	DEFICIENCIES NOTED (LIST)	DEFICIENCIES CORRECTED (DATE)
2. Ground fault circuit interrupters or assured equipment grounding program provided for electrical wiring cords and equipment	✓		
3. Temporary wiring safe	✓		
L. TRENCHING AND EXCAVATION			
1. All trenches shored or sloped as required	N/A		
2. Property barricaded or flagged	✓		
M. CRANES AND EQUIPMENT			
1. Rated load capacities posted on equipment	✓		
2. Correct hand signals used	✓		
3. Competent inspection of machinery prior to and during usage	✓		
4. Fire extinguisher in cab of equipment	✓		
5. Swing radius of crane body barricaded	N/A		
6. Tag lines being used on all lifts	N/A		
7. Area below lift barricaded	N/A		
8. Backup warning devices	✓		
9. Is the operation clear of nearby power lines	✓		
N. STEEL ERECTION			
1. At least two bolts at each connection before releasing the load	N/A		
O. SAFETY BELTS			
1. Safety belts worn for elevated work	N/A		
2. Worker securing safety belt line whenever possible	N/A		
P. ROLLOVER PROTECTIVE STRUCTURES			
1. Machines equipped	✓		
2. Used properly	✓		



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	ACCEPTABLE	DEFICIENCIES NOTED (LIST)	DEFICIENCIES CORRECTED (DATE)
Q. PERSONNEL OBSERVING SAFE WORK PRACTICES	<input checked="" type="checkbox"/>		
REMARKS	<u>NO lost TIME INJURY OR INJURYs</u> <u>AS of the first Day on the Job.</u>		

NOTE: CHECK OSHA REGULATIONS FOR DETAILED REQUIREMENTS APPLICABLE FOR EACH CATEGORY LISTED.

INSPECTOR Paul H. Covarrubias DATE 3-26-90

INTEROFFICE CORRESPONDENCE

DATE February 7, 1990
TO S. A. Marshall
FROM S. D. Whicker *SDW*
SUBJECT CONSTRUCTION SAFETY INSPECTION

CSI01790.vls

Per HSE 24.01 and DOE Order 5480.9, an inspection of 881 Hillside and 891 Building Construction was conducted on February 6, 1990. This inspection was limited to the items listed on the attached Construction Safety Inspection Report. A copy of this report must be posted at the job site for five (5) working days.

Please take appropriate action to correct the noted deficiencies and respond in writing within five (5) working days as to the action taken or planned for each item. Your response should be sent to Industrial Safety, Building T452C.

If you have any questions, you may call me on extension 7634.

vls

Attachment:
As Stated

cc:
I. Duran
D. W. Ferrera
J. L. Hebert
C. E. Kennedy
J. D. Weaver

*posted in
Garcia trailer
per Ike 2/12*

☐ Work stoppage ordered due to hazard
by _____
Date _____ Time _____

Type of Inspection Construction Safety

INSPECTOR S. D. Whicker *SDW* Date 2-6-90

PECTION GROUP I. Duran, S. D. Whicker

BLDG/AREA/JOB/P.O.# 881 Hillside, 891 Building Construction

OTHER INFORMATION _____

ITEM	LOCATION	REQUIREMENT or STANDARD	HAZARD/DEFICIENCY and RECOMMENDED ACTION	TAKE ACTION WITHIN
1.	881	NA	1 drill rig and four man crew in area. Drill rig okay at this time, and all personnel complying with all safety requirements.	NA
2.	891	29-1926.25(a)	Several scrap pieces of forming material need to be removed from area, and Visqueen sheeting used to cover rebar during non-working hours needs to be folded and weighted down to prevent blowing in the wind. Contractor's foreman was notified, and both items were corrected immediately.	Done
3.	891	29-1926.700 (b)(2)	Vertical reinforcing steel located at the northwest corner of the foundation does not have the protruding ends covered. Also as stirrup bars are installed they shall be protected. Contractor's foreman notified and situation was immediately corrected.	Done

*Joe
we needed to
have an inspection
done before we
corrected. I have
told to go to the PM
on this. Thanks
Duran*

RADIATION PROTECTION

LOG BOOK

FOR

8B1 HILLSIDE

REMEDIAL ACTION

RADIOLOGICAL MONITORING Contamination Survey

Taken by: _____ Empl# _____

Taken by: _____ Empl# _____

Taken by: _____ Empl# _____

Date: _____

Time: _____

Shift: _____

Survey Description: _____

Instrumentation Used

Mfg:	1. <u>Bicron</u>	2. <u>Bicron</u>	3. <u>Bicron</u>
Model:	1. <u>Fiddler</u>	2. <u>Fiddler</u>	3. <u>Fiddler</u>
Serial #:	1. _____	2. _____	3. _____
Date Per. CK:	1. _____	2. _____	3. _____
Cal. Due Date:	1. _____	2. _____	3. _____

Mfg:	1. <u>Ludlum</u>	2. <u>Ludlum</u>	3. <u>Ludlum</u>
Model:	1. <u>31</u>	2. <u>31</u>	3. <u>31</u>
Serial #:	1. _____	2. _____	3. _____
Date Per. CK:	1. _____	2. _____	3. _____
Cal. Due Date:	1. _____	2. _____	3. _____

OTHER INSTRUMENTS

Mfg:	1. <u>Ludlum</u>	2. <u>Ludlum</u>	3. <u>Ludlum</u>
Model:	1. <u>12 - 1A</u>	2. <u>12 - 1A</u>	3. <u>12 - 1A</u>
Serial #:	1. _____	2. _____	3. _____
Date Calib'do	1. _____	2. _____	3. _____
Date Calib'dUE	1. _____	2. _____	3. _____

RESULTS Initial

1.	_____	_____
2.	_____	_____
3.	_____	_____
4.	_____	_____
5.	_____	_____
	CPM Removable (Swipe)	CPM Direct
1.	_____	_____
2.	_____	_____
3.	_____	_____
4.	_____	_____
5.	_____	_____
6.	_____	_____
7.	_____	_____
8.	_____	_____
9.	_____	_____
10.	_____	_____

COMMENTS

RADIOLOGICAL MONITORING Contamination Survey

Taken by: J. Munoz, Jr. Empl#

Taken by: Empl#

Taken by: Empl#

Date: 3-22-90

Time: 1700

Shift: P.M.

Survey Description: 881 N. side; excavation
for electric Telephone? Tank foundations

Instrumentation Used

Mfg:	1. <u>Bicron</u>	2. <u>Bicron</u>	3. <u>Bicron</u>
Model:	1. <u>Fiddler</u>	2. <u>Fiddler</u>	3. <u>Fiddler</u>
Serial #:	1. <u>1512V</u>	2. <u> </u>	3. <u> </u>
Date Per. CK:	1. <u>3-2-90</u>	2. <u> </u>	3. <u> </u>
Cal. Due Date:	1. <u>2-90</u>	2. <u> </u>	3. <u> </u>

Mfg:	1. <u>Ludlum</u>	2. <u>Ludlum</u>	3. <u>Ludlum</u>
Model:	1. <u>31</u>	2. <u>31</u>	3. <u>31</u>
Serial #:	1. <u> </u>	2. <u> </u>	3. <u> </u>
Date Per. CK:	1. <u> </u>	2. <u> </u>	3. <u> </u>
Cal. Due Date:	1. <u> </u>	2. <u> </u>	3. <u> </u>

OTHER INSTRUMENTS

Mfg:	1. <u>Ludlum</u>	2. <u>Ludlum</u>	3. <u>Ludlum</u>
Model:	1. <u>12-1A</u>	2. <u>12-1A</u>	3. <u>12-1A</u>
Serial #:	1. <u> </u>	2. <u> </u>	3. <u> </u>
Date Calib'd:	1. <u> </u>	2. <u> </u>	3. <u> </u>
Date Calib'due	1. <u> </u>	2. <u> </u>	3. <u> </u>

RESULTS Initial

1. <u>1700 Bkgd</u>	
2. <u> </u>	
3. <u> </u>	
4. <u> </u>	
5. <u> </u>	
CPM	
Removable	CPM
(Swipe)	Direct
1. <u> </u>	<u>300</u>
2. <u> </u>	
3. <u> </u>	
4. <u> </u>	
5. <u> </u>	
6. <u> </u>	
7. <u> </u>	
8. <u> </u>	
9. <u> </u>	
10. <u> </u>	

COMMENTS

All area fiddle before excavation; results were
300 c/m with a 1700 c/m bkgd. fm

RADIOLOGICAL MONITORING Contamination Survey

Taken by: J. Monz, Jr Empl# [REDACTED]

Taken by: _____ Empl# _____

Taken by: _____ Empl# _____

Date: 3-22-90

Time: 1700

Shift: P.M.

Survey Description: 881 Hillside excavation
for electric telephone? back foundation

Instrumentation Used

Mfg:	1. <u>Bicron</u>	2. <u>Bicron</u>	3. <u>Bicron</u>
Model:	1. <u>Fiddler</u>	2. <u>Fiddler</u>	3. <u>Fiddler</u>
Serial #:	1. <u>N512P</u>	2. _____	3. _____
Date Per. CK:	1. <u>3-2-90</u>	2. _____	3. _____
Cal. Due Date:	1. <u>2-91</u>	2. _____	3. _____

Mfg:	1. <u>Ludlum</u>	2. <u>Ludlum</u>	3. <u>Ludlum</u>
Model:	1. <u>31</u>	2. <u>31</u>	3. <u>31</u>
Serial #:	1. _____	2. _____	3. _____
Date Per. CK:	1. _____	2. _____	3. _____
Cal. Due Date:	1. _____	2. _____	3. _____

OTHER INSTRUMENTS

Mfg:	1. <u>Ludlum</u>	2. <u>Ludlum</u>	3. <u>Ludlum</u>
Model:	1. <u>12 - 1A</u>	2. <u>12 - 1A</u>	3. <u>12 - 1A</u>
Serial #:	1. _____	2. _____	3. _____
Date Calib'd:	1. _____	2. _____	3. _____
Date Calib'due	1. _____	2. _____	3. _____

RESULTS

Initial

1.	<u>1500 BKG</u>
2.	_____
3.	_____
4.	_____
5.	_____

	CPM	CPM
	Removable	Direct
	(Swipe)	

1.	_____	<u>500</u>
2.	_____	_____
3.	_____	_____
4.	_____	_____
5.	_____	_____
6.	_____	_____
7.	_____	_____
8.	_____	_____
9.	_____	_____
10.	_____	_____

COMMENTS

All area fiddle after excavation & backfill: results
were 500 cpm with a 1500 cpm bkgd. for